



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-1163

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 12/20/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 12/14/2011 07:50 Date/Time Received: 12/15/2011 15:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / December 2011

R Number: R 92710

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result <math>\pm</math> CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-1163-001	<del>Drinking</del> Water Outfall	EPA 901.1	K-40	338 $\pm$ 17.5	59.5	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received <b>12-15-11</b>	Lab No. (Leave Blank) <b>N11-1163</b>
	Date & Time Sampled <b>12/14/11 0750</b>	Serial Number <b>R 92710</b>
<b>Collector Information</b> Name: Dept./Branch: <b>TOM HOOK</b> Address: <b>P.O. BOX 56 AVILA BEACH, CA 93424</b> Telephone No.: <b>(805) 515-4409</b>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <b>DCPP OUTFALL</b> Sampling Point (s): <b>OUT</b> System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFD ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  | _____  | <input checked="" type="checkbox"/> Milk     | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

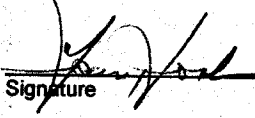
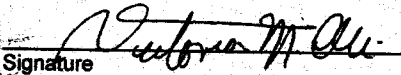
## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |                                     |                              |  |                                   |
|-------------------------------------|------------------------------|--|-----------------------------------|
| 1. Date <b>12/14/11</b>             | Name (Print) <b>TOM HOOK</b> | Signature  | Date <b>12/14/11</b>              |
| Time Custody Received <b>0750</b>   | Organization <b>PG&amp;E</b> |  | Time Custody Released <b>1700</b> |
| 2. Date _____                       | Name (Print) _____           | Signature _____  | Date _____                        |
| Time Custody Received _____         | Organization _____           | Signature _____  | Time Custody Released _____       |
| 3. Date <b>12-15-11</b>             | Name (Print) <b>UN</b>       | Signature  | Date _____                        |
| Time Custody Received <b>3:30pm</b> | Organization <b>DWRLB</b>    |  | Time Custody Released _____       |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



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EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-1162

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 01/04/2012

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 12/14/2011 07:50 Date/Time Received: 12/15/2011 07:50

Site Name: Diablo Canyon NPP

Source Name: DCNPP / December 2011

R Number: R 92697

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-1162-001	Outfall Water	EPA 906.0	Tritium	-24.5 ± 129	223	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 12-15-2011	Lab No. (Leave Blank) N11-1162
	Date & Time Sampled 12/14/11 0750	Serial Number R 92697
<b>Collector Information</b> Name: Dept./Branch: TOM HOOK Address: P.O. Box 56 AVILA BEACH, CA 93424 Telephone No.: (805) 455-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DCRP OUTFALL Sampling Point (s): OUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister ☒ Other: PLUTONIUM SAMPLE

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr  
☐ Rush/Priority (should be prearranged and have supervisory approval)  
☐ Field/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Radionuclide(s), if known: \_\_\_\_\_

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

1.	Date 12/14/11	Name (Print) Tom Hook	Signature 	Date 12/14/11
	Time Custody Received 0750	Organization PG&E		Time Custody Released 1700
2.	Date	Name (Print)	Signature	Date
	Time Custody Received	Organization		Time Custody Released
3.	Date 12-15-11	Name (Print) UA	Signature	Date
	Time Custody Received 10:00	Organization DWR/LB	Signature 	Time Custody Released

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:  $\leq 0.01$  MR/Hr
- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable





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EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-1159

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 12/19/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 12/13/2011 09:12 Date/Time Received: 12/14/2011 10:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / December 2011

R Number: R 92708

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-1159-001	Bio Lab Sink	EPA 901.1	K-40	59.5 ± 15.9	71.7	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 12-14-2011	Lab No. (Leave Blank) N11-1159
	Date & Time Sampled 12/13/11 0912	Serial Number R 92708
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: BIO LAB Sampling Point (s): DW1 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister ☐ Other: \_\_\_\_\_

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radium-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                                |                          |               |                               |
|----|--------------------------------|--------------------------|---------------|-------------------------------|
| 1. | Date<br>12/13/11               | Name (Print)<br>Tom Hook | Signature<br> | Date<br>12/13/11              |
|    | Time Custody Received<br>0912  | Organization<br>PG&E     |               | Time Custody Released<br>1700 |
| 2. | Date                           | Name (Print)             | Signature     | Date                          |
|    | Time Custody Received          | Organization             |               | Time Custody Released         |
| 3. | Date<br>12-14-11               | Name (Print)<br>VIA      | Signature<br> | Date                          |
|    | Time Custody Received<br>10:30 | Organization<br>DWR LAB  |               | Time Custody Released         |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



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Director

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California Department of Public Health

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EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-1160

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 01/04/2012

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 12/13/2011 10:30 Date/Time Received: 12/14/2011 10:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / December 2011

R Number: R 92700

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-1160-001	Bio Lab Sink	EPA 906.0	Tritium	-28.0 ± 129	223	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 12-14-11	Lab No. (Leave Blank) N11-1160
	Date & Time Sampled 12/13/11 - 0912	Serial Number R 92700
<b>Collector Information</b> Name: Tom Hook Dept./Branch: P.O. Box 50 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: BIO LAB Sampling Point (s): DW1 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters \_\_\_\_\_ Date/Time \_\_\_\_\_ ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ ☐ Milk ☐ Soil/Sediment  
Starting: \_\_\_\_\_ ☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_ ☐ Radon Canister ☒ Other: TRUTH SAMPLE
- ☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (SC)           | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |   |   |   |
|---|---|---|
| 1. Date 12/13/11<br>Time Custody Received 0912  | Name (Print) Tom Hook<br>Organization PG&E<br>Signature [Signature] | Date 12/13/11<br>Time Custody Released 1700 |
| 2. Date _____<br>Time Custody Received _____    | Name (Print) _____<br>Organization _____<br>Signature _____         | Date _____<br>Time Custody Released _____   |
| 3. Date 12-14-11<br>Time Custody Received 10:30 | Name (Print) U/A<br>Organization DWRLB<br>Signature [Signature]     | Date _____<br>Time Custody Released _____   |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-1157

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 12/19/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 12/13/2011 08:56 Date/Time Received: 12/14/2011 10:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / December 2011

R Number: R 92711

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-1157-001	Diablo Creek	EPA 901.1	K-40	19.0 ± 12.9	60.0	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 12/14/11	Lab No. (Leave Blank) NIP-1157
	Date & Time Sampled 12/13/11 0856	Serial Number R 92711
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>P.O. Box 56</u> Address: <u>Avila Beach, CA 93424</u> Telephone No.: <u>(805) 545-4429</u>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <u>DIABLO GREEN</u> Sampling Point (s): <u>552</u> System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☒ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister ☐ Other: \_\_\_\_\_

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Cooled/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☒ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |   |  |                              |   |
|---|--|------------------------------|---|
| 1. Date <u>12/13/11</u><br>Time Custody Received <u>0856</u>  | Name (Print) <u>Tom Hook</u><br>Organization <u>PG&amp;E</u> | Signature <u>[Signature]</u> | Date <u>12/13/11</u><br>Time Custody Released <u>1700</u> |
| 2. Date _____<br>Time Custody Received _____                  | Name (Print) _____<br>Organization _____                     | Signature _____              | Date _____<br>Time Custody Released _____                 |
| 3. Date <u>12/14/11</u><br>Time Custody Received <u>10:30</u> | Name (Print) <u>UA</u><br>Organization <u>DWR L B</u>        | Signature <u>[Signature]</u> | Date _____<br>Time Custody Released _____                 |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-1158

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 01/04/2012

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 12/13/2011 08:56 Date/Time Received: 12/14/2011 10:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / December 2011

R Number: R 92696

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-1158-001	Diablo Creek	EPA 906.0	Tritium	-52.4 ± 129	223	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 12/14/11	Lab No. (Leave Blank) N11-1158
	Date & Time Sampled 12/13/11 0856	Serial Number R 92696
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 515-4400	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DIABLO CREEK Sampling Point (s): 552 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |   |   |
|---|--|---|---|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input checked="" type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater                       |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System      | <input type="checkbox"/> Point of Use (POU)               |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |   |   |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater                 | <input type="checkbox"/> Sludge (Semi-solid Samples)      |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                     | <input type="checkbox"/> Soil/Sediment                    |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes                    | <input type="checkbox"/> Biota (Type): _____              |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister           | <input checked="" type="checkbox"/> Other: TRITIUM SAMPLE |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |   |   |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Ice/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (BSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

1.	Date 12/13/11	Name (Print) TOM HOOK	Signature 	Date 12/13/11
	Time Custody Received 0856	Organization PG&E		Time Custody Released 1700
2.	Date	Name (Print)	Signature	Date
	Time Custody Received	Organization		Time Custody Released
3.	Date 12/14/11	Name (Print) VIA	Signature 	Date
	Time Custody Received 10:30	Organization DWR L B		Time Custody Released

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|





RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-1079

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 12/12/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 11/15/2011 08:37 Date/Time Received: 11/16/2011 09:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / November 2011

R Number: 92602

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-1079-001	Bio Lab Sink	EPA 901.1	K-40	17.2 ± 17.0	79.4	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 11/16/11	Lab No. (Leave Blank) N11-1079
	Date & Time Sampled 11/15/11 0837	Serial Number R 92602
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.D. BOX 50 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: BLD LAB Sampling Point (s): DW1 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister ☐ Other: \_\_\_\_\_

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☒ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan  
☐ Total Uranium ☐ Total Beta (ES) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

- |  |  |                        |   |
|--|--|------------------------|---|
| 1. Date: 11/15/11<br>Time Custody Received: 0837 | Name (Print): TOM HOOK<br>Organization: PLGK | Signature: [Signature] | Date: 11/15/11<br>Time Custody Released: 1700 |
| 2. Date: _____<br>Time Custody Received: _____   | Name (Print): _____<br>Organization: _____   | Signature: _____       | Date: _____<br>Time Custody Released: _____   |
| 3. Date: 11/16/11<br>Time Custody Received: 9:30 | Name (Print): UIA<br>Organization: DWRLB     | Signature: [Signature] | Date: _____<br>Time Custody Released: _____   |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: **6.001 MR/HR**  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-1080

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 01/04/2012

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 11/15/2011 08:37 Date/Time Received: 11/16/2011 09:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / November 2011

R Number: 92593

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-1080-001	Bio Lab Sink	EPA 906.0	Tritium	-29.7 ± 129	223	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 11/16/11	Lab No. (Leave Blank) NII-1080
	Date & Time Sampled 11/15/11 0837	Serial Number R 92593
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 50 Address: ALILA BEACH, CA 93424 Telephone No.: (205) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: BIO LAB Sampling Point (s): DW1 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister ☒ Other: TITANIUM SAMPLER

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (T<sub>2</sub>) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                          |                                  |                                 |                          |
|----|--------------------------|----------------------------------|---------------------------------|--------------------------|
| 1. | Date<br>11/15/11<br>0837 | Name (Print)<br>Tom Hook<br>P666 | Signature<br><i>[Signature]</i> | Date<br>11/15/11<br>1700 |
|    | Time Custody Received    | Organization                     |                                 | Time Custody Released    |
| 2. | Date                     | Name (Print)                     | Signature                       | Date                     |
|    | Time Custody Received    | Organization                     |                                 | Time Custody Released    |
| 3. | Date<br>11/16/11<br>0830 | Name (Print)<br>DWR LB           | Signature<br><i>[Signature]</i> | Date                     |
|    | Time Custody Received    | Organization                     |                                 | Time Custody Released    |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- C. 0.01 MR/HR



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-1077

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 12/02/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 11/15/2011 08:15 Date/Time Received: 11/16/2011 09:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / November 2011

R Number: 92596

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result <math>\pm</math> CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-1077-001	Diablo Creek	EPA 901.1	K-40	13.7 $\pm$ 13.0	60.3	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 11/16/11	Lab No. (Leave Blank) N11-1037
	Date & Time Sampled 11/15/11 - 0815	Serial Number R 92596
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. Box 56 Address: ALILA BEACH, CA 93424 Telephone No.: (303) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DIABLO CREEK Sampling Point (s): System No.: 552	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input checked="" type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input checked="" type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |   |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater                       | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                           | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes                          | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister                 | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |   |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

1. Date: 11/15/11	Name (Print): TOM HOOK	Signature: _____	Date: 11/15/11
Time Custody Received: 0815	Organization: P.O. Box 56		Time Custody Released: 1700
2. Date: _____	Name (Print): _____	Signature: _____	Date: _____
Time Custody Received: _____	Organization: _____		Time Custody Released: _____
3. Date: 11/16/11	Name (Print): U.A.	Signature: Victoria W. De	Date: _____
Time Custody Received: 9:30	Organization: DWRLB		Time Custody Released: _____

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-1078

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 01/04/2012

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 11/15/2011 08:15 Date/Time Received: 11/16/2011 09:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / November 2011

R Number: 92592

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-1078-001	Diablo Creek	EPA 906.0	Tritium	112 ± 133	223	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 11/16/11	Lab No. (Leave Blank) N11-1078
	Date & Time Sampled 11/15/11 - 0815	Serial Number R 92592
<b>Collector Information</b> Name: <u>TOM HOOK</u> Dept./Branch: <u>P.O. BOX 50</u> Address: <u>AVILA BEACH, CA 93424</u> Telephone No.: <u>(805) 815-4409</u>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <u>DIABLO GREEN</u> Sampling Point (s): <u>SS2</u> System No.:	<b>Billing Agency</b> <input checked="" type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input checked="" type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater                              |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System      | <input type="checkbox"/> Point of Use (POU)                      |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |   |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater                 | <input type="checkbox"/> Sludge (Semi-solid Samples)             |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                     | <input type="checkbox"/> Soil/Sediment                           |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes                    | <input type="checkbox"/> Biota (Type): _____                     |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister           | <input checked="" type="checkbox"/> Other: <u>TRITIUM SAMPLE</u> |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |   |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |                                   |                              |                                   |
|-----------------------------------|------------------------------|-----------------------------------|
| 1. Date <u>11/15/11</u>           | Name (Print) <u>TOM HOOK</u> | Date <u>11/15/11</u>              |
| Time Custody Received <u>1815</u> | Organization <u>PG&amp;E</u> | Time Custody Released <u>1700</u> |
| 2. Date _____                     | Name (Print) _____           | Date _____                        |
| Time Custody Received _____       | Organization _____           | Time Custody Released _____       |
| 3. Date <u>11/16/11</u>           | Name (Print) <u>VIA</u>      | Date _____                        |
| Time Custody Received <u>9:30</u> | Organization <u>DWARLB</u>   | Time Custody Released _____       |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|
- < 0.01 MR/HR





RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-1068

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 12/02/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Orlando Sabi

Date/Time Collected: 11/14/2011 07:40 Date/Time Received: 11/15/2011 10:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / November 2011

R Number: 92564

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-1068-001	Outfall Water	EPA 901.1	K-40	346 ± 23.4	86.9	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 11/15/11	Lab No. (Leave Blank) N11-1068
	Date & Time Sampled 11/14/11 0740	Serial Number R 92564
<b>Collector Information</b> Name: ORLANDO SABI Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA. 93424 Telephone No.: (805) 545-4415	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DCPP OUTFALL Sampling Point (s): OUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| - Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment               |
| - Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- |  |   |                                       |
|--|---|---------------------------------------|
| <input type="checkbox"/> Field Treatment: Preservatives added: _____                         | <input type="checkbox"/> Iced/Frozen: _____               | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Field Measurement: _____ mR/hr                                      | <input type="checkbox"/> Radionuclide(s), if known: _____ |                                       |
| <input type="checkbox"/> Rush/Priority (should be prearranged and have supervisory approval) |   |                                       |

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input checked="" type="checkbox"/> Gross Alpha | <input checked="" type="checkbox"/> Gross Beta     | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |   |  |                                 |   |
|---|--|---------------------------------|---|
| 1. <u>11/14/11</u><br>Date<br><u>0740</u><br>Time Custody Received  | <u>ORLANDO SABI</u><br>Name (Print)<br><u>PG+E</u><br>Organization | <u>[Signature]</u><br>Signature | <u>11/14/11</u><br>Date<br><u>1700</u><br>Time Custody Released |
| 2. _____<br>Date<br>_____<br>Time Custody Received                  | _____<br>Name (Print)<br>_____<br>Organization                     | _____<br>Signature              | _____<br>Date<br>_____<br>Time Custody Released                 |
| 3. <u>11/15/11</u><br>Date<br><u>10:30</u><br>Time Custody Received | <u>UA</u><br>Name (Print)<br><u>DWRLB</u><br>Organization          | <u>[Signature]</u><br>Signature | _____<br>Date<br>_____<br>Time Custody Released                 |

## LABORATORY REMARKS (Leave Blank)

- |  |  |   |   |
|--|--|---|---|
| <b>A. Condition at Time of Receipt:</b>        |  |   |   |
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container    | <input checked="" type="checkbox"/> Leaked in Transit | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled   | <input type="checkbox"/> Insufficient Sample          |   |
| <b>B. Preservatives/Carriers:</b>              |  |   |   |
| <input type="checkbox"/> Added While Sampling  | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added                    | <input type="checkbox"/> Not Applicable     |



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-1069

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 01/04/2012

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Orlando Sabi

Date/Time Collected: 11/14/2011 07:40 Date/Time Received: 11/15/2011 10:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / November 2011

R Number: 92557

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result <math>\pm</math> CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-1069-001	Outfall Water	EPA 906.0	Tritium	80.4 $\pm$ 132	223	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 11/15/11	Lab No. (Leave Blank) N11-1069
	Date & Time Sampled 11/14/11 0740	Serial Number R 92557
<b>Collector Information</b> Name: ORLANDO SABI Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA. 93424 Telephone No.: (805) 545-4415	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: Sampling Point (s): DC-PP Outfall System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify)	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water             | <input type="checkbox"/> Wastewater                      |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System       | <input type="checkbox"/> Point of Use (POU)              |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input checked="" type="checkbox"/> Seawater       | <input type="checkbox"/> Sludge (Semi-solid Samples)     |
| Finishing: _____  | _____  | <input checked="" type="checkbox"/> Milk           | <input type="checkbox"/> Soil/Sediment                   |
| Starting: _____   | _____  | <input checked="" type="checkbox"/> Wipes          | <input type="checkbox"/> Biota (Type): _____             |
| Net (M <sup>3</sup> ) _____   | _____  | <input checked="" type="checkbox"/> Radon Canister | <input checked="" type="checkbox"/> Other: TETRAH BOTTLE |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (CSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |   |   |   |
|---|---|---|
| 1. Date: 11/14/11<br>Time Custody Received: 0740  | Name (Print): ORLANDO SABI<br>Organization: _____<br>Signature: _____ | Date: 11/14/11<br>Time Custody Released: 1700 |
| 2. Date: _____<br>Time Custody Received: _____    | Name (Print): _____<br>Organization: _____<br>Signature: _____        | Date: _____<br>Time Custody Released: _____   |
| 3. Date: 11/15/11<br>Time Custody Received: 10:30 | Name (Print): VA<br>Organization: DWRLB<br>Signature: _____           | Date: _____<br>Time Custody Released: _____   |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0985

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 11/16/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 10/19/2011 09:44 Date/Time Received: 10/20/2011 09:50

Site Name: Diablo Canyon NPP

Source Name: DCNPP / October 2011

R Number: R 92565

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0985-001	Diablo Creek	EPA 901.1	K-40	28.7 ± 13.2	60.6	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 10/20/11	Lab No. (Leave Blank) N 111-0985
	Date & Time Sampled 10/19/11 - 0944	Serial Number R 92565
<b>Collector Information</b> Name: Tom Hook Dept./Branch: P.O. Box 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DIABLO GREEN Sampling Point (s): 552 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister ☐ Other: \_\_\_\_\_

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

1. Date: 10/19/11 Time Custody Received: 0944	Name (Print): Tom Hook Organization: PG&E	Signature: [Signature]	Date: 10/19/11 Time Custody Released: 1700
2. Date: _____ Time Custody Received: _____	Name (Print): _____ Organization: _____	Signature: _____	Date: _____ Time Custody Released: _____
3. Date: 10/20/11 Time Custody Received: 9:50	Name (Print): UA Organization: DWRLB	Signature: [Signature]	Date: _____ Time Custody Released: _____

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: 20.01 MR/HR
- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0986

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 12/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 10/19/2011 09:44 Date/Time Received: 10/20/2011 09:50

Site Name: Diablo Canyon NPP

Source Name: DCNPP / October 2011

R Number: R 92553

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0986-001	Diablo Creek	EPA 906.0	Tritium	12.2 ± 160	275	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 10/20/11	Lab No. (Leave Blank) NV-0986
	Date & Time Sampled 10/19/11 0944	Serial Number R 92553
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <del>DIABLO</del> CREEK Sampling Point (s): <del>SS2</del> System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge
- ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☒ Other: TRITIUM SAMPLE

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Ice/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan  
☐ Total Uranium ☐ Total Beta (SC) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (T<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☒ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                          |                                  |               |                          |
|----|--------------------------|----------------------------------|---------------|--------------------------|
| 1. | Date<br>10/19/11<br>0944 | Name (Print)<br>Tom Hook<br>PG&E | Signature<br> | Date<br>10/19/11<br>1700 |
| 2. | Time Custody Received    | Organization<br>PG&E             | Signature     | Time Custody Released    |
|    | Date                     | Name (Print)                     | Signature     | Date                     |
|    | Time Custody Received    | Organization                     | Signature     | Time Custody Released    |
| 3. | Date<br>10/20/11<br>9:50 | Name (Print)<br>UA               | Signature<br> | Date                     |
|    | Time Custody Received    | Organization<br>DWRLB            | Signature<br> | Time Custody Released    |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- 60.0 < 0.01 MR/HR





RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0987

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 11/16/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 10/19/2011 09:55 Date/Time Received: 10/20/2011 09:50

Site Name: Diablo Canyon NPP

Source Name: DCNPP / October 2011

R Number: R 92489

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0987-001	Bio Lab Sink	EPA 901.1	K-40	2.06 ± 17.2	81.0	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 10/20/11	Lab No. (Leave Blank) N11-0987
	Date & Time Sampled 10/19/11 - 0955	Serial Number R 92489
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 50 Address: AVILA BEACH, CA 93424 Telephone No.: (707) 555-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: B10 LAB Sampling Point (s): DW1 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water    ☐ Groundwater    ☐ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_    ☐ Milk    ☐ Soil/Sediment  
 Starting: \_\_\_\_\_    ☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
 Net (M<sup>3</sup>) \_\_\_\_\_    ☐ Radon Canister    ☐ Other: \_\_\_\_\_
- ☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_    Cooled/Frozen: \_\_\_\_\_    Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☒ Gamma Scan  
☐ Total Uranium    ☐ Total Beta (LSC)    ☐ NORM (Gamma)  
☐ Total Radium    ☐ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☒ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                              |                        |                        |                              |
|----|------------------------------|------------------------|------------------------|------------------------------|
| 1. | Date: 10/19/11               | Name (Print): Tom Hook | Signature: [Signature] | Date: 10/19/11               |
|    | Time Custody Received: 0955  | Organization: PG&E     |                        | Time Custody Released: 1700  |
| 2. | Date: _____                  | Name (Print): _____    | Signature: _____       | Date: _____                  |
|    | Time Custody Received: _____ | Organization: _____    |                        | Time Custody Released: _____ |
| 3. | Date: 10/20/11               | Name (Print): VA       | Signature: [Signature] | Date: _____                  |
|    | Time Custody Received: 9:50  | Organization: DWRLB    |                        | Time Custody Released: _____ |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0988

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 12/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 10/19/2011 09:55 Date/Time Received: 10/20/2011 09:50

Site Name: Diablo Canyon NPP

Source Name: DCNPP / October 2011

R Number: R 92480

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0988-001	Bio Lab Sink	EPA 906.0	Tritium	-81.2 ± 158	275	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 10/20/11	Lab No. (Leave Blank) N11-0988
	Date & Time Sampled 10/19/11 - 0955	Serial Number R 92480
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 544-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: BID LAB Sampling Point (s): DWI System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |   |
|---|--|--|---|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                       |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)               |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |   |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater            | <input type="checkbox"/> Sludge (Semi-solid Samples)      |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment                    |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____              |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input checked="" type="checkbox"/> Other: TRITIUM SAMPLE |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |   |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                           | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)                     | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input checked="" type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                            | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                           | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90                     | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                            | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |                              |                        |                        |                              |
|------------------------------|------------------------|------------------------|------------------------------|
| 1. Date: 10/19/11            | Name (Print): TOM HOOK | Signature: [Signature] | Date: 10/19/11               |
| Time Custody Received: 0955  | Organization: PG&E     |                        | Time Custody Released: 1700  |
| 2. Date: _____               | Name (Print): _____    | Signature: _____       | Date: _____                  |
| Time Custody Received: _____ | Organization: _____    |                        | Time Custody Released: _____ |
| 3. Date: 10/20/11            | Name (Print): _____    | Signature: [Signature] | Date: _____                  |
| Time Custody Received: 9:50  | Organization: DWRI B   |                        | Time Custody Released: _____ |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0961

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 11/16/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 10/17/2011 07:40 Date/Time Received: 10/18/2011 11:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / October 2011

R Number: R 92534

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0961-001	Outfall Water	EPA 901.1	K-40	340 ± 17.9	61.8	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 10/16/11	Lab No. (Leave Blank) N11-0961
	Date & Time Sampled 10/17/11 - 0740	Serial Number R 92534
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DOPP OUTFALL Sampling Point (s): OUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister ☐ Other: \_\_\_\_\_

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |   |  |                        |   |
|---|--|------------------------|---|
| 1. Date: 10/17/11<br>Time Custody Received: 0740  | Name (Print): TOM HOOK<br>Organization: P666 | Signature: [Signature] | Date: 10/17/11<br>Time Custody Released: 1700 |
| 2. Date: _____<br>Time Custody Received: _____    | Name (Print): _____<br>Organization: _____   | Signature: _____       | Date: _____<br>Time Custody Released: _____   |
| 3. Date: 10/18/11<br>Time Custody Received: 11:00 | Name (Print): UA<br>Organization: DWRLB      | Signature: [Signature] | Date: _____<br>Time Custody Released: _____   |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0962

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 12/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 10/17/2011 07:40 Date/Time Received: 10/18/2011 11:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / October 2011

R Number: R 92554

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0962-001	Outfall Water	EPA 906.0	Tritium	6.09 ± 160	275	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 10/18/11	Lab No. (Leave Blank) N11710916021
	Date & Time Sampled 10/17/11 0740	Serial Number R 92554
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>P.O. Box 50</u> Address: <u>AVILA BEACH, CA 93424</u> Telephone No.: <u>(805) 545-4409</u>	<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____	
<b>Sample Information</b> System Name / Facility: <u>DCPP OUTFALL</u> Sampling Point (s): <u>OUT</u> System No.: _____	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                              |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)                      |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater            | <input type="checkbox"/> Sludge (Semi-solid Samples)             |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment                           |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____                     |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input checked="" type="checkbox"/> Other: <u>TRITIUM BOTTLE</u> |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Ice/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |   |   |                                 |   |
|---|---|---------------------------------|---|
| 1. <u>10/17/11</u><br>Date<br><u>0740</u><br>Time Custody Received  | <u>Tom Hook</u><br>Name (Print)<br><u>PLS</u><br>Organization | <u>[Signature]</u><br>Signature | <u>10/17/11</u><br>Date<br><u>1700</u><br>Time Custody Released |
| 2. _____<br>Date  | _____<br>Name (Print)   | _____<br>Signature              | _____<br>Date   |
| Time Custody Received   | _____<br>Organization   | _____<br>Signature              | _____<br>Time Custody Released                                  |
| 3. <u>10/18/11</u><br>Date<br><u>11:00</u><br>Time Custody Received | <u>UN</u><br>Name (Print)<br><u>DWRLB</u><br>Organization     | <u>[Signature]</u><br>Signature | _____<br>Date<br>_____<br>Time Custody Released                 |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|





RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0898

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 09/28/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 09/19/2011 09:40 Date/Time Received: 09/20/2011 11:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / September 2011

R Number: R 91100

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0898-001	Diablo Creek	EPA 901.1	K-40	22.1 ± 13.1	60.4	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9/20/11	Lab No. (Leave Blank) N11-0898
	Date & Time Sampled 9/19/11 0940	Serial Number R 91100
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DIABLO CASSIN Sampling Point (s): 552 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water    ☐ Groundwater    ☒ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_  
 Starting: \_\_\_\_\_  
 Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge
- ☐ Milk    ☐ Soil/Sediment  
☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister    ☐ Other: \_\_\_\_\_

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☐ Gamma Scan  
☐ Total Uranium    ☐ Total Beta (SC)    ☐ NORM (Gamma)  
☐ Total Radium    ☐ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☐ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

1.	Date 9/19/11 Time Custody Received 0940	Name (Print) Tom Hook Organization P.O. Box 56	Signature 	Date 9/19/11 Time Custody Released 1700
2.	Date _____ Time Custody Received _____ Date _____ Time Custody Received _____	Name (Print) _____ Organization _____ Name (Print) _____ Organization _____	Signature _____ Signature _____	Date _____ Time Custody Released _____ Date _____ Time Custody Released _____
3.	Date 9/20/11 Time Custody Received 11:30	Name (Print) J.A. Organization DWRLB	Signature 	Date _____ Time Custody Released _____ Date _____ Time Custody Released _____

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**  
☐ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample
- B. Preservatives/Carriers:**  
☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable
- L.O.D. 1 MR/HR



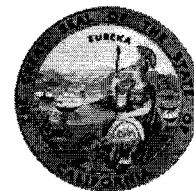
RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0899

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 10/10/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 09/19/2011 11:00 Date/Time Received: 09/20/2011 11:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / September 2011

R Number: R 92548

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result <math>\pm</math> CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0899-001	Diablo Creek	EPA 906.0	Tritium	101 $\pm$ 147	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9/20/11	Lab No. (Leave Blank) N11-0899
	Date & Time Sampled 9/19/11 0940	Serial Number R 92548
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>P.O. Box 56</u> Address: <u>AVILA BEACH, CA 93454</u> Telephone No.: <u>(805) 545-4409</u>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <u>D1 ABLO CREEK</u> Sampling Point (s): System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☒ Distribution System ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister ☒ Other: PLUTONIUM SAMPLE

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Cooled/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)  
☐ Total Radium ☒ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

- |  |   |  |
|--|---|--|
| 1. <u>9/19/11</u><br>Date<br><u>0940</u><br>Time Custody Received  | <u>Tom Hook</u><br>Name (Print)<br><u>P.O. Box 56</u><br>Organization | <u>9/19/11</u><br>Date<br><u>1300</u><br>Time Custody Released |
| 2. _____<br>Date<br>_____ Time Custody Received                    | _____<br>Name (Print)<br>_____<br>Organization                        | _____<br>Date<br>_____ Time Custody Released                   |
| 3. <u>9/20/11</u><br>Date<br><u>11:30</u><br>Time Custody Received | <u>U.A.</u><br>Name (Print)<br><u>DWRLB</u><br>Organization           | _____<br>Date<br>_____ Time Custody Released                   |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: C.O.D. MR/HR
- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0900

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 09/28/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 09/19/2011 09:30 Date/Time Received: 09/20/2011 11:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / September 2011

R Number: R 91111

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0900-001	Bio Lab Sink	EPA 901.1	K-40	36.8 ± 14.1	64.5	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9/20/11	Lab No. (Leave Blank) NITE 0900
	Date & Time Sampled 9/19/11 0930	Serial Number R 91111
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>P.O. Box 50</u> Address: <u>AVILA BEACH, CA 93454</u> Telephone No.: <u>(805) 545-4409</u>		
<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____		
<b>Sample Information</b> System Name / Facility: <u>BIO LAB</u> Sampling Point (s): <u>DWI</u> System No.: _____		
<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____		

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water    ☐ Groundwater    ☐ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time \_\_\_\_\_    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_    ☐ Milk    ☐ Soil/Sediment  
 Starting: \_\_\_\_\_    ☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
 Net (M<sup>3</sup>) \_\_\_\_\_    ☐ Radon Canister    ☐ Other: \_\_\_\_\_  
☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_    Iced/Frozen: \_\_\_\_\_    Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☒ Gamma Scan  
☒ Total Uranium    ☐ Total Beta (LSC)    ☐ NORM (Gamma)  
☐ Total Radium    ☐ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☐ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                                |                             |               |                               |
|----|--------------------------------|-----------------------------|---------------|-------------------------------|
| 1. | Date<br>9/19/11                | Name (Print)<br>Tom Hook    | Signature<br> | Date<br>9/19/11               |
|    | Time Custody Received<br>0930  | Organization<br>P.O. Box 50 |               | Time Custody Released<br>1700 |
| 2. | Date                           | Name (Print)                | Signature     | Date                          |
|    | Time Custody Received          | Organization                |               | Time Custody Released         |
| 3. | Date<br>9/20/11                | Name (Print)<br>DWR CB      | Signature<br> | Date                          |
|    | Time Custody Received<br>11:30 | Organization                |               | Time Custody Released         |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**  
☐ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample
- B. Preservatives/Carriers:**  
☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable
- 6.001 MR/HR



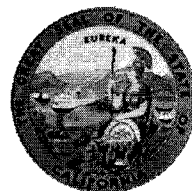
RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0901

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 10/10/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 09/19/2011 09:30 Date/Time Received: 09/20/2011 11:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / September 2011

R Number: R 92544

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0901-001	Bio Lab Sink	EPA 906.0	Tritium	47.7 ± 145	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9/20/11	Lab No. (Leave Blank) 111-901
	Date & Time Sampled 9/19/11 0930	Serial Number R 92544
<b>Collector Information</b> Name: <u>Tony Hook</u> Dept./Branch: <u>P.O. Box 520</u> Address: <u>AYALA BEACH, CA 93426</u>	<b>Reporting Information</b> Name: Dept./Branch: Address:	
Telephone No.:	Telephone No.:	
<b>Sample Information</b> System Name / Facility: <u>BIO LAB</u> Sampling Point (s): <u>DWI</u> System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                            |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)                    |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater            | <input type="checkbox"/> Sludge (Semi-solid Samples)           |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment                         |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____                   |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input checked="" type="checkbox"/> Other: <u>TRIUM BOTTLE</u> |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Rad/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                           | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (SC)                      | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input checked="" type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                            | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                           | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90                     | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                            | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |   |  |  |
|---|--|--|
| 1. <u>9/19/11</u><br>Date<br><u>0930</u><br>Time Custody Received | <u>Tony Hook</u><br>Name (Print)<br><u>PG&amp;K</u><br>Organization<br>Signature | <u>9/19/11</u><br>Date<br><u>1700</u><br>Time Custody Released |
| 2. _____<br>Date<br>_____<br>Time Custody Received                | _____<br>Name (Print)<br>_____<br>Organization<br>Signature                      | _____<br>Date<br>_____<br>Time Custody Released                |
| 3. <u>9/20/11</u><br>Date<br><u>1130</u><br>Time Custody Received | _____<br>Name (Print)<br>_____<br>Organization<br>Signature                      | _____<br>Date<br>_____<br>Time Custody Released                |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:**
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|
- < 0.01 mR/hr





RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0902

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 09/28/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Steve Hsu

Date/Time Collected: 09/19/2011 07:45 Date/Time Received: 09/20/2011 11:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / September 2011

R Number: R 91406

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0902-001	Outfall Water	EPA 901.1	K-40	330 ± 17.7	62.5	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9/20/11	Lab No. (Leave Blank) N11-0902
	Date & Time Sampled 9/19/11 0745	Serial Number R 91406
<b>Collector Information</b> Name: Tom Hook Dept./Branch: P.O. Box 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DCPD OUTFALL Sampling Point (s): DUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water    ☐ Groundwater    ☐ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time    ☒ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_    ☐ Milk    ☐ Soil/Sediment  
 Starting: \_\_\_\_\_    ☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
 Net (M<sup>3</sup>) \_\_\_\_\_    ☐ Radon Canister    ☐ Other: \_\_\_\_\_  
☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☐ Gamma Scan  
☐ Total Uranium    ☐ Total Beta (LSC)    ☐ NORM (Gamma)  
☐ Total Radium    ☐ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☐ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

- |    |  |  |  |  |
|----|--|--|--|--|
| 1. | Date<br>9/19/11<br>Time Custody Received<br>0745   | Name (Print)<br>Tom Hook<br>Organization<br>P666   | Signature<br>                            | Date<br>9/19/11<br>Time Custody Released<br>0745 1700  |
| 2. | Date<br>_____<br>Time Custody Received<br>_____<br>Date<br>_____<br>Time Custody Released<br>_____ | Name (Print)<br>_____<br>Organization<br>_____<br>Name (Print)<br>_____<br>Organization<br>_____ | Signature<br>_____<br>Signature<br>_____ | Date<br>_____<br>Time Custody Released<br>_____<br>Date<br>_____<br>Time Custody Released<br>_____ |
| 3. | Date<br>9/20/11<br>Time Custody Received<br>11:30  | Name (Print)<br>DWA<br>Organization<br>DWR LCB   | Signature<br>                            | Date<br>_____<br>Time Custody Released<br>_____<br>Date<br>_____<br>Time Custody Released<br>_____ |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**  
☐ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample
- B. Preservatives/Carriers:**  
☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable
- C 0.01 MR/HR

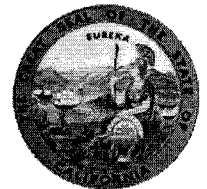


RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0903

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 10/10/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 09/19/2011 07:45 Date/Time Received: 09/20/2011 11:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / September 2011

R Number: R 92543

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0903-001	Outfall Water	EPA 906.0	Tritium	113 ± 147	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 9/20/11	Lab No. (Leave Blank) 111-0903
	Date & Time Sampled 9/19/11 0745	Serial Number R 92543
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>P.O. Box 56</u> Address: <u>Avila Beach, CA 93424</u> Telephone No.: <u>(805) 548-0409</u>	<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____	
<b>Sample Information</b> System Name / Facility: <u>DCPP OUTFALL</u> Sampling Point (s): <u>OUT</u> System No.: _____	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                              |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)                      |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples)             |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment                           |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____                     |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input checked="" type="checkbox"/> Other: <u>TRITIUM SAMPLE</u> |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr. ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                           | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (TSC)                     | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input checked="" type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                            | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                           | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90                     | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                            | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |  |   |                                 |  |
|--|---|---------------------------------|--|
| 1. <u>9/19/11</u><br>Date<br><u>0745</u><br>Time Custody Received  | <u>Tom Hook</u><br>Name (Print)<br><u>PLC</u><br>Organization | <u>[Signature]</u><br>Signature | <u>9/19/11</u><br>Date<br><u>1700</u><br>Time Custody Released |
| 2. _____<br>Date<br>_____ Time Custody Received                    | _____<br>Name (Print)<br>_____<br>Organization                | _____<br>Signature              | _____<br>Date<br>_____<br>Time Custody Released                |
| 3. <u>9/20/11</u><br>Date<br><u>11:30</u><br>Time Custody Received | <u>UA</u><br>Name (Print)<br><u>DWRLB</u><br>Organization     | <u>[Signature]</u><br>Signature | _____<br>Date<br>_____<br>Time Custody Released                |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:** L 0.01 MR/HR
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:**
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0801

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 08/26/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Orlando Sabi

Date/Time Collected: 08/15/2011 07:40 Date/Time Received: 08/16/2011 11:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / August 2011

R Number: R 92479

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0801-001	Outfall Water	EPA 901.1	K-40	382 ± 19.3	65.3	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 8/16/11	Lab No. (Leave Blank) N11-04001
	Date & Time Sampled 8/15/11 0740	Serial Number R 92479
<b>Collector Information</b> Name: ORLANDO SABI Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA. 93424 Telephone No.: (805) 545-4475	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DLPP OUTFALL Sampling Point (s): System No.: OUT	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Sent/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |   |  |
|---|--|
| 1. Date: 8/15/11<br>Time Custody Received: 0740     | Name (Print): ORLANDO SABI<br>Organization: PEXS<br>Signature: [Signature]<br>Date: 8/15/11<br>Time Custody Released: 1700 |
| 2. Date: _____<br>Time Custody Received: _____      | Name (Print): _____<br>Organization: _____<br>Signature: _____<br>Date: _____<br>Time Custody Released: _____              |
| 3. Date: 8/16/11<br>Time Custody Received: 11:00 AM | Name (Print): V/A<br>Organization: DWRLB<br>Signature: [Signature]<br>Date: _____<br>Time Custody Released: _____          |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: L 0.01 MUR/HR
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



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Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0803

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 10/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Orlando Sabi

Date/Time Collected: 08/15/2011 07:40 Date/Time Received: 08/16/2011 11:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / August 2011

R Number: R 92483

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0803-001	Outfall Water	EPA 906.0	Tritium	-69.8 ± 156	271	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 8/16/11	Lab No. (Leave Blank) N11-0803
	Date & Time Sampled 8/15/11 0740	Serial Number R 92483
<b>Collector Information</b> Name: ORLANDO SABI Dept./Branch: P.O. BOX 56 Address: AVILA BEACH 90424 Telephone No.: (805) 545-4415	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DCPD OUTFALL Sampling Point (s): OUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister ☒ Other: TRITIUM SAMPLE

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                          |                                      |                    |                         |                       |
|----|--------------------------|--------------------------------------|--------------------|-------------------------|-----------------------|
| 1. | Date<br>8/15/11<br>0740  | Name (Print)<br>ORLANDO SABI<br>PGYS | Signature<br>      | Date<br>8/15/11<br>1700 | Time Custody Released |
| 2. | Date<br>_____            | Name (Print)<br>_____                | Signature<br>_____ | Date<br>_____           | Time Custody Released |
| 3. | Date<br>8/16/11<br>11 am | Name (Print)<br>VA<br>DWRLB          | Signature<br>      | Date<br>_____           | Time Custody Released |

## LABORATORY REMARKS (Leave Blank)

## A. Condition at Time of Receipt:

- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

## B. Preservatives/Carriers:

- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable





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Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0768

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 08/22/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 08/03/2011 09:45 Date/Time Received: 08/04/2011 11:20

Site Name: Diablo Canyon NPP

Source Name: DCNPP / Aug 2011

R Number: R 92412

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0768-001	Bio Lab Sink	EPA 901.1	K-40	49.6 ± 15.2	69.1	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 8/4/11	Lab No. (Leave Blank) N11-0764
	Date & Time Sampled 8/3/11 - 0945	Serial Number R 92412
<b>Collector Information</b> Name: <u>TEMI HOOK</u> Dept./Branch: <u>P.O. BOX 510</u> Address: <u>AVILA BEACH, CA 93424</u> Telephone No.: <u>(209) 545-4109</u>	<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____	
<b>Sample Information</b> System Name / Facility: <u>BIO LAB</u> Sampling Point (s): <u>DW1</u> System No.: _____	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input checked="" type="checkbox"/> Drinking Water  | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater            | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  |  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   |  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   |  | <input type="checkbox"/> Radon Canister      | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                           | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)                     | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input checked="" type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                            | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                           | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90                     | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                            | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |    |                                |                           |               |                               |
|----|--------------------------------|---------------------------|---------------|-------------------------------|
| 1. | Date<br>8/3/11                 | Name (Print)<br>TEMI HOOK | Signature<br> | Date<br>8/3/11                |
|    | Time Custody Received<br>0945  | Organization<br>PSC       |               | Time Custody Released<br>1700 |
| 2. | Date                           | Name (Print)              | Signature     | Date                          |
|    | Time Custody Received          | Organization              |               | Time Custody Released         |
| 3. | Date<br>8/4/11                 | Name (Print)<br>VA        | Signature<br> | Date                          |
|    | Time Custody Received<br>11:20 | Organization<br>DWRLB     |               | Time Custody Released         |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: < 0.01 MR/HR
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



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Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0769

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 10/10/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 08/03/2011 11:00 Date/Time Received: 08/04/2011 11:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / August 2011

R Number: R 92462

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0769-001	Bio Lab Sink	EPA 906.0	Tritium	-17.9 ± 144	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 8/4/11	Lab No. (Leave Blank) N11-0769
	Date & Time Sampled 8/3/11 - 0945	Serial Number R 92462
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>P.O. Box 56</u> Address: <u>ALMA BEACH, CA 94824</u> Telephone No.: <u>(303) 545-4409</u>	<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____	
<b>Sample Information</b> System Name / Facility: <u>BIO LAB</u> Sampling Point (s): <u>DWI</u> System No.: _____	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                            |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)                    |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater            | <input type="checkbox"/> Sludge (Semi-solid Samples)           |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment                         |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____                   |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input checked="" type="checkbox"/> Other: <u>TRIUM SAMPLE</u> |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                           | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (TSC)                     | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input checked="" type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                            | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                           | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90                     | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                            | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |   |  |   |
|---|--|---|
| 1. <u>8/3/11</u><br>Date<br><u>0945</u><br>Time Custody Received  | <u>Tom Hook</u><br>Name (Print)<br><u>PG&amp;K</u><br>Organization | <u>8/3/11</u><br>Date<br><u>1700</u><br>Time Custody Released         |
| 2. _____<br>Date<br>_____<br>Time Custody Received                | _____<br>Name (Print)<br>_____<br>Organization                     | _____<br>Date<br>_____<br>Time Custody Released                       |
| 3. <u>8/4/11</u><br>Date<br><u>11:00</u><br>Time Custody Received | <u>VA</u><br>Name (Print)<br><u>DWRLB</u><br>Organization          | <u>Victoria M. Ali</u><br>Signature<br>_____<br>Time Custody Released |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:** LO.01 MR/HR
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:**
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0766

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 08/22/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 08/03/2011 09:30 Date/Time Received: 08/04/2011 11:15

Site Name: Diablo Canyon NPP

Source Name: DCNPP / August 2011

R Number: R 92429

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0766-001	Diablo Creek	EPA 901.1	K-40	36.3 ± 18.0	82.9	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 8/4/11	Lab No. (Leave Blank) W11-0766
	Date & Time Sampled 8/3/11-0930	Serial Number R 92429
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93442 Telephone No.: (805) 345-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DIABLO CREEK Sampling Point (s): 552 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input checked="" type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input checked="" type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |   |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater                       | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                           | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   | _____  | <input checked="" type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   | _____  | <input checked="" type="checkbox"/> Radon Canister      | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |   |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Sed/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☒ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |                              |                        |                  |                              |
|------------------------------|------------------------|------------------|------------------------------|
| 1. Date: 8/3/11              | Name (Print): TOM HOOK | Signature: _____ | Date: 8/3/11                 |
| Time Custody Received: 0930  | Organization: PG&E     |                  | Time Custody Released: 1700  |
| 2. Date: _____               | Name (Print): _____    | Signature: _____ | Date: _____                  |
| Time Custody Received: _____ | Organization: _____    | Signature: _____ | Time Custody Released: _____ |
| 3. Date: 8/4/11              | Name (Print): V. IA    | Signature: _____ | Date: _____                  |
| Time Custody Received: 11:15 | Organization: DWRLB    |                  | Time Custody Released: _____ |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: **< 0.01 MR/HR**
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0767

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 10/10/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 08/03/2011 09:30 Date/Time Received: 08/04/2011 11:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / August 2011

R Number: R 90044

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result <math>\pm</math> CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0767-001	Diablo Creek	EPA 906.0	Tritium	21.9 $\pm$ 145	248	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 8/4/11		Lab No. (Leave Blank) N11-0767	
		Date & Time Sampled 8/3/11-0930		Serial Number R 90044	
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: (951) 455-4459			<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:		
<b>Sample Information</b> System Name / Facility: DIABLO CREEK Sampling Point (s): 592 System No.:			<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input checked="" type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____		

☐ Drinking Water      ☐ Groundwater      ☒ Surface Water      ☐ Wastewater  
☐ Raw      ☐ Water Treatment Plant (WTP)      ☐ Distribution System      ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters      Date/Time \_\_\_\_\_  
 Finishing: \_\_\_\_\_  
 Starting: \_\_\_\_\_  
 Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge

☒ Seawater  
☒ Milk  
☒ Wipes  
☒ Radon Canister

☐ Sludge (Semi-solid Samples)  
☐ Soil/Sediment  
☐ Biota (Type): \_\_\_\_\_  
☒ Other: TRITIAL SAMPLE

☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

<input type="checkbox"/> Gross Alpha	<input type="checkbox"/> Gross Beta	<input type="checkbox"/> Gamma Scan
<input type="checkbox"/> Total Uranium	<input type="checkbox"/> Total Beta (LSC)	<input type="checkbox"/> NORM (Gamma)
<input type="checkbox"/> Total Radium	<input checked="" type="checkbox"/> Tritium ( $^3\text{H}$ )	<input type="checkbox"/> Isotopic Americium / Curium
<input type="checkbox"/> Radium-226	<input type="checkbox"/> Carbon-14	<input type="checkbox"/> Isotopic Plutonium
<input type="checkbox"/> Radium-228	<input type="checkbox"/> Iodine-131	<input type="checkbox"/> Isotopic Thorium
<input type="checkbox"/> Radon-222	<input type="checkbox"/> Strontium-89, 90	<input type="checkbox"/> Isotopic Uranium
<input type="checkbox"/> Other (Specify): _____	<input type="checkbox"/> Nickel-63	<input type="checkbox"/> Iron-55

1.	Date	Name (Print)	Organization	Signature	Date	Name (Print)	Organization	Signature
	8/3/11	Tom Hork	PC-E	[Signature]	8/2/11			
	1730				1700			
2.	Date	Name (Print)	Organization	Signature	Date	Name (Print)	Organization	Signature
3.	Date	Name (Print)	Organization	Signature	Date	Name (Print)	Organization	Signature
	8/4/11	VA	DWRLB					
	11:00							

**A. Condition at Time of Receipt:**  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample

**B. Preservatives/Carriers:**  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable





RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0735

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 08/22/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 07/18/2011 07:46 Date/Time Received: 07/19/2011 11:45

Site Name: Diablo Canyon NPP

Source Name: DCNPP / July 2011

R Number: R 92471

Sample Type: ~~Surface Water~~ *Seawater*

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result <math>\pm</math> CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0735-001	Outfall Water	EPA 901.1	K-40	358 $\pm$ 18.3	62.5	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 7/19/11	Lab No. (Leave Blank) N11-0735
	Date & Time Sampled 7/18/11 0746	Serial Number R 92471
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>PO Box 56</u> Address: <u>Avila Beach, CA 93424</u> Telephone No.: <u>805-545-4409</u>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <u>DCPP OUTFALL</u> Sampling Point (s): <u>OUT</u> System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water    ☐ Groundwater    ☐ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_  
 Starting: \_\_\_\_\_  
 Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge
- ☐ Milk    ☐ Soil/Sediment  
☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister    ☐ Other: \_\_\_\_\_

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☒ Gamma Scan  
☐ Total Uranium    ☐ Total Beta (LSC)    ☐ NORM (Gamma)  
☐ Total Radium    ☐ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☐ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                               |                                      |               |                               |
|----|-------------------------------|--------------------------------------|---------------|-------------------------------|
| 1. | Date<br>7/18/11               | Name (Print)<br><u>Rich Treisman</u> | Signature<br> | Date<br>7/18/11               |
|    | Time Custody Received<br>0746 | Organization<br>PG&E                 |               | Time Custody Released<br>1700 |
| 2. | Date                          | Name (Print)                         | Signature     | Date                          |
|    | Time Custody Received         | Organization                         |               | Time Custody Released         |
| 3. | Date<br>7/19/11               | Name (Print)<br>UA                   | Signature<br> | Date                          |
|    | Time Custody Received<br>1145 | Organization<br>DWARLB               |               | Time Custody Released         |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**  
☒ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample
- B. Preservatives/Carriers:**  
☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☒ Not Applicable

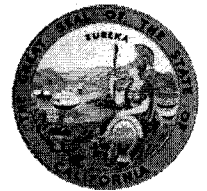


RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0736

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 10/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 07/18/2011 07:46 Date/Time Received: 07/19/2011 11:45

Site Name: Diablo Canyon NPP

Source Name: DCNPP / July 2011

R Number: R 90862

Sample Type: ~~Surface Water~~ *Seawater*

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0736-001	Outfall Water	EPA 906.0	Tritium	-152 ± 154	271	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 7/19/11	Lab No. (Leave Blank) N11-0736
	Date & Time Sampled 7/18/11 0746	Serial Number R 90862
<b>Collector Information</b> Name: Tom Hook Dept./Branch: PO Box 56 Address: Avila Beach, CA 93424 Telephone No.: 805-545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DCPD OUTFALL Sampling Point (s): OUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ ☐ Milk ☐ Soil/Sediment  
Stating: \_\_\_\_\_ ☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_ ☐ Radon Canister ☒ Other: Tritium Sample  
☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Cooled/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

- |  |  |                        |  |
|--|--|------------------------|--|
| 1. Date: 7/18/11<br>Time Custody Received: 0746  | Name (Print): Rick Treinen<br>Organization: PG&E | Signature: [Signature] | Date: 7/18/11<br>Time Custody Released: 1700 |
| 2. Date: _____<br>Time Custody Received: _____   | Name (Print): _____<br>Organization: _____       | Signature: _____       | Date: _____<br>Time Custody Released: _____  |
| 3. Date: 7/19/11<br>Time Custody Received: 11:45 | Name (Print): LIA<br>Organization: DWRLB         | Signature: [Signature] | Date: _____<br>Time Custody Released: _____  |

## LABORATORY REMARKS (Leave Blank)

- LABORATORY REMARKS (Leave Blank) L 0.01 MR/HR
- A. Condition at Time of Receipt:  
☒ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0712

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 07/19/2011

**Requestor**

Name: Tom Hook

Organization: Radiologic Health Branch

Address: P.O. Box 56

City: Avila Beach

State: CA

Zip Code:

Phone: 805-545-4409

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 07/13/2011 14:40 Date/Time Received: 07/14/2011 11:25

Site Name: Diablo Canyon NPP

Source Name: DCNPP / July 2011

R Number: R 92469

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0712-001	Diablo Creek	EPA 901.1	K-40	29.1 ± 17.3	80.1	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 7/14/11	Lab No. (Leave Blank) 11-0712
	Date & Time Sampled 7/12/11-1440	Serial Number R 92469
<b>Collector Information</b> Name: Tom Hook Dept./Branch: P.O. Box 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DIABLO CREEK Sampling Point (s): 552 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input checked="" type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System      | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |   |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater                 | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                     | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes                    | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister           | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |   |  |

## COMMENTS: (Cautions, etc.):

- |  |   |              |
|--|---|--------------|
| <input type="checkbox"/> Field Treatment: Preservatives added: _____                         | Iced/Frozen: _____  | Other: _____ |
| <input type="checkbox"/> Field Measurement: _____ mR/hr                                      | <input type="checkbox"/> Radionuclide(s), if known: _____ |              |
| <input type="checkbox"/> Rush/Priority (should be prearranged and have supervisory approval) |   |              |

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta       | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC) | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium (H)      | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14        | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131       | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90 | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63        | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |                              |                        |                        |                              |
|------------------------------|------------------------|------------------------|------------------------------|
| 1. Date: 7/13/11             | Name (Print): Tom Hook | Signature: [Signature] | Date: 7/13/11                |
| Time Custody Received: 1140  | Organization: P.E.K.   |                        | Time Custody Released: 1700  |
| 2. Date: _____               | Name (Print): _____    | Signature: _____       | Date: _____                  |
| Time Custody Received: _____ | Organization: _____    |                        | Time Custody Released: _____ |
| 3. Date: 7-14-11             | Name (Print): VA       | Signature: [Signature] | Date: _____                  |
| Time Custody Received: 1125  | Organization: DWRLB    |                        | Time Custody Released: _____ |

## LABORATORY REMARKS (Leave Blank)

- |  |  |  |   |
|--|--|--|---|
| A. Condition at Time of Receipt:               |  |  |   |
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container    | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled   | <input type="checkbox"/> Insufficient Sample |   |
| B. Preservatives/Carriers:                     |  |  |   |
| <input type="checkbox"/> Added While Sampling  | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added           | <input type="checkbox"/> Not Applicable     |
- C 0.02 mR/Hr



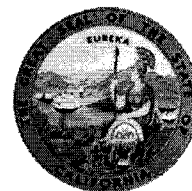
RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0713

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 10/07/2011

**Requestor**

Name: Tom Hook

Organization: Radiologic Health Branch

Address: P.O. Box 56

City: Avila Beach

State: CA

Zip Code:

Phone: 805-545-4409

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected:

7/13/11

14:40

Date/Time Received: 07/14/2011 13:41

Site Name: Diablo Canyon NPP

Source Name: DCNPP / July 2011

R Number: R 92461

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0713-001	Diablo Creek	EPA 906.0	Tritium	-53.8 ± 156	271	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 7/14/11	Lab No. (Leave Blank) N11-0713
	Date & Time Sampled 7/13/11 - 1440	Serial Number R 92461
<b>Collector Information</b> Name: <u>TOM HOOK</u> Dept./Branch: <u>P.O. BOX 50</u> Address: <u>AVILA BEACH, CA 93424</u> Telephone No.: <u>(805) 545-4409</u>	<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____	
<b>Sample Information</b> System Name / Facility: <u>DIABLO GREEN</u> Sampling Point (s): <u>552</u> System No.: _____	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water    ☐ Groundwater    ☒ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time \_\_\_\_\_    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_    ☐ Milk    ☐ Soil/Sediment  
 Starting: \_\_\_\_\_    ☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
 Net (M<sup>3</sup>) \_\_\_\_\_    ☐ Radon Canister    ☒ Other: 7/13/11 1440  
☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_    Iced/Frozen: \_\_\_\_\_    Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☐ Gamma Scan  
☐ Total Uranium    ☐ Total Beta (LSC)    ☐ NORM (Gamma)  
☐ Total Radium    ☐ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☐ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

- |    |   |  |                              |  |
|----|---|--|------------------------------|--|
| 1. | Date <u>7/13/11</u><br>Time Custody Received <u>1440</u>    | Name (Print) <u>TOM HOOK</u><br>Organization <u>PG&amp;E</u> | Signature <u>[Signature]</u> | Date <u>7/13/11</u><br>Time Custody Released <u>1700</u> |
| 2. | Date _____<br>Time Custody Received _____                   | Name (Print) _____<br>Organization _____                     | Signature _____              | Date _____<br>Time Custody Released _____                |
| 3. | Date <u>7/14/11</u><br>Time Custody Received <u>10:55am</u> | Name (Print) <u>VA</u><br>Organization <u>DWR LCB</u>        | Signature <u>[Signature]</u> | Date _____<br>Time Custody Released _____                |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: < 0.02 MR/hr
- ☒ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable





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Director

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California Department of Public Health

Drinking Water and Radiation Laboratory Branch

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Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0709

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 07/19/2011

**Requestor**

Name: Tom Hook

Organization: Radiologic Health Branch

Address: P.O. Box 56

City: Avila Beach

State: CA

Zip Code:

Phone: 805-545-4409

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 07/13/2011 14:26 Date/Time Received: 07/14/2011 11:25

Site Name: Diablo Canyon NPP

Source Name: DCNPP / July 2011

R Number: R 92472

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result <math>\pm</math> CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0709-001	Bio Lab Sink	EPA 901.1	K-40	0.945 $\pm$ 17.6	83.0	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 7/14/11	Lab No. (Leave Blank) VA 92472 N11-0709
	Date & Time Sampled 7/13/11 1426	Serial Number R 92472
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: BIO LAB Sampling Point (s): DW1 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input checked="" type="checkbox"/> Drinking Water  | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                  |
| <input checked="" type="checkbox"/> Raw   | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater            | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (ESC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |  |  |                       |  |
|--|--|-----------------------|--|
| 1. Date 7/13/11<br>Time Custody Received 1426  | Name (Print) TOM HOOK<br>Organization PG&E | Signature [Signature] | Date 7/13/11<br>Time Custody Released 1700 |
| 2. Date _____<br>Time Custody Received _____   | Name (Print) _____<br>Organization _____   | Signature _____       | Date _____<br>Time Custody Released _____  |
| 3. Date 7/14/11<br>Time Custody Received 11:25 | Name (Print) VA<br>Organization DWRLB      | Signature [Signature] | Date _____<br>Time Custody Released _____  |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: < 0.01 MR/Hr
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



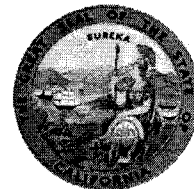
RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0711

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 10/07/2011

**Requestor**

Name: Tom Hook

Organization: Radiologic Health Branch

Address: P.O. Box 56

City: Avila Beach

State: CA

Zip Code:

Phone: 805-545-4409

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 07/13/2011 14:26 Date/Time Received: 07/14/2011 10:55

Site Name: Diablo Canyon NPP

Source Name: DCNPP / July 2011

R Number: R 92460

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0711-001	Bio Lab Sink	EPA 906.0	Tritium	-116 ± 155	271	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 7/14/11	Lab No. (Leave Blank) N11-0711
	Date & Time Sampled 7/13/11 1426	Serial Number R 92460
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: (209) 544-9409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <del>DEVELOPMENT</del> BIO LAB Sampling Point (s): <del>SWR</del> DWI System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time \_\_\_\_\_ ☐ Milk ☐ Soil/Sediment  
Starting: \_\_\_\_\_ ☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_ ☐ Radon Canister ☒ Other: TRITIUM SAMPLE
- ☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Cooled/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                                  |                             |                                 |                               |
|----|----------------------------------|-----------------------------|---------------------------------|-------------------------------|
| 1. | Date<br>7/13/11<br>1426          | Name (Print)<br>Tom Hook    | Signature<br><i>[Signature]</i> | Date<br>7/13/11               |
|    | Time Custody Received            | Organization<br>P.O. Box 56 |                                 | Time Custody Released<br>1700 |
| 2. | Date                             | Name (Print)                | Signature                       | Date                          |
|    | Time Custody Received            | Organization                |                                 | Time Custody Released         |
| 3. | Date<br>7/14/11                  | Name (Print)<br>VA          | Signature<br><i>[Signature]</i> | Date                          |
|    | Time Custody Received<br>10:55am | Organization<br>DWRLB       |                                 | Time Custody Released         |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: < 0.01 MB/Hr  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0638

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/23/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 06/13/2011 07:30 Date/Time Received: 06/14/2011 11:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / June 2011

R Number: R92432

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0638-001	Outfall Water	EPA 901.1	K-40	417 ± 22.5	83.1	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 6/14/11	Lab No. (Leave Blank) N11-06381
	Date & Time Sampled 6/13/11 0730	Serial Number R 92432
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 50 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DCP OUTFALL Sampling Point (s): OUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Cooled/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (TSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |  |  |                       |  |
|--|--|-----------------------|--|
| 1. Date 6/13/11<br>Time Custody Received 1730  | Name (Print) TOM HOOK<br>Organization PG&E | Signature [Signature] | Date 6/13/11<br>Time Custody Released 1700 |
| 2. Date _____<br>Time Custody Received _____   | Name (Print) _____<br>Organization _____   | Signature _____       | Date _____<br>Time Custody Released _____  |
| 3. Date 6/14/11<br>Time Custody Received 11:30 | Name (Print) A. TAN<br>Organization DDWRL  | Signature [Signature] | Date _____<br>Time Custody Released _____  |

## LABORATORY REMARKS (Leave Blank)

## A. Condition at Time of Receipt:

- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |

## B. Preservatives/Carriers:

- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

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Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0639

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 07/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 06/13/2011 07:30 Date/Time Received: 06/14/2011 11:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / June 2011

R Number: R90929

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0639-001	Diablo Canyon	EPA 906.0	Tritium	-62.0 ± 169	293	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 6/14/11	Lab No. (Leave Blank) N11-0639
	Date & Time Sampled 6/13/11 0730	Serial Number R 90929
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>PO Box 56</u> Address: <u>Avila Beach, CA 93424</u> Telephone No.: <u>805-545-4409</u>	<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____	
<b>Sample Information</b> System Name / Facility: <u>DCPP OUTFALL</u> Sampling Point (s): <u>OUT</u> System No.: _____	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                              |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)                      |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time _____                                      | <input type="checkbox"/> Seawater            | <input type="checkbox"/> Sludge (Semi-solid Samples)             |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment                           |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____                     |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input checked="" type="checkbox"/> Other: <u>Tritium Sample</u> |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr  
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Cooled/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Radionuclide(s), if known: \_\_\_\_\_

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha                    | <input type="checkbox"/> Gross Beta                           | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium                  | <input type="checkbox"/> Total Beta (ESC)                     | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium                   | <input checked="" type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226                     | <input type="checkbox"/> Carbon-14                            | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228                     | <input type="checkbox"/> Iodine-131                           | <input type="checkbox"/> Isotopic Thorium            |
| <input checked="" type="checkbox"/> Radium-222          | <input type="checkbox"/> Strontium-89, 90                     | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): <u>A. TAN</u> | <input type="checkbox"/> Nickel-63                            | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |  |   |  |
|--|---|--|
| 1. Date: <u>6/13/11</u><br>Time Custody Received: <u>0730</u>  | Name (Print): <u>Tom Hook</u><br>Organization: <u>DCPP</u><br>Signature: _____            | Date: <u>6/13/11</u><br>Time Custody Released: <u>1700</u> |
| 2. Date: _____<br>Time Custody Received: _____                 | Name (Print): _____<br>Organization: _____<br>Signature: _____                            | Date: _____<br>Time Custody Released: _____                |
| 3. Date: <u>6/14/11</u><br>Time Custody Received: <u>11:30</u> | Name (Print): <u>A. TAN</u><br>Organization: <u>DDWRL</u><br>Signature: <u>Angela Tan</u> | Date: _____<br>Time Custody Released: _____                |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|





RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0627

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/23/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 06/08/2011 09:00 Date/Time Received: 06/09/2011 11:40

Site Name: Diablo Canyon NPP

Source Name: DCNPP / June 2011

R Number: R92433

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0627-001	Bio Lab Sink	EPA 901.1	K-40	6.93 ± 16.4	76.6	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 6/9/11	Lab No. (Leave Blank) M11-0627
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409		Date & Time Sampled 6/8/11-0900	Serial Number R 92433
<b>Sample Information</b> System Name / Facility: BID LAB Sampling Point (s): DW1 System No.:		<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water    ☐ Groundwater    ☐ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time \_\_\_\_\_    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_    ☐ Milk    ☐ Soil/Sediment  
 Starting: \_\_\_\_\_    ☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
 Net (M<sup>3</sup>) \_\_\_\_\_    ☐ Radon Canister    ☐ Other: \_\_\_\_\_
- ☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_    Cooled/Frozen: \_\_\_\_\_    Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☒ Gamma Scan  
☐ Total Uranium    ☐ Total Beta (SC)    ☐ NORM (Gamma)  
☐ Total Radium    ☐ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☐ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                                |                          |                         |                               |
|----|--------------------------------|--------------------------|-------------------------|-------------------------------|
| 1. | Date<br>6/8/11                 | Name (Print)<br>Tom Hook | Signature<br>           | Date<br>6/8/11                |
|    | Time Custody Received<br>0900  | Organization<br>PG&E     |                         | Time Custody Released<br>1700 |
| 2. | Date                           | Name (Print)             | Signature               | Date                          |
|    | Time Custody Received          | Organization             |                         | Time Custody Released         |
| 3. | Date<br>6/9/11                 | Name (Print)<br>A. TAN   | Signature<br>Angele Tan | Date                          |
|    | Time Custody Received<br>11:40 | Organization<br>DWRLB    |                         | Time Custody Released         |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- ☐ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0628

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 07/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 06/08/2011 09:00 Date/Time Received: 06/09/2011 11:40

Site Name: Diablo Canyon NPP

Source Name: DCNPP / June 2011

R Number: R90956

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0628-001	Bio Lab Sink	EPA 906.0	Tritium	-73.1 ± 169	293	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received <u>6/8/11</u>	Lab No. (Leave Blank) <u>N11-0628</u>
	Date & Time Sampled <u>6/8/11-0900</u>	Serial Number <u>R 90956</u>
<b>Collector Information</b> Name: <u>TOM HOOK</u> Dept./Branch: <u>P.O. BOX 56</u> Address: <u>ALILA BEACH, CA 93424</u> Telephone No.: <u>(805) 545-3449</u>		<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____
<b>Sample Information</b> System Name / Facility: <u>BIO LAB</u> Sampling Point (s): <u>DWI</u> System No.: _____		<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____

## TYPE OF SAMPLE (Check all applicable boxes)

<input checked="" type="checkbox"/> Drinking Water	<input type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water	<input type="checkbox"/> Wastewater
<input checked="" type="checkbox"/> Raw	<input type="checkbox"/> Water Treatment Plant (WTP)	<input type="checkbox"/> Distribution System	<input type="checkbox"/> Point of Use (POU)
<input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted			
<input type="checkbox"/> Air Filters	Date/Time _____	<input type="checkbox"/> Seawater	<input type="checkbox"/> Sludge (Semi-solid Samples)
Finishing: _____	_____	<input type="checkbox"/> Milk	<input type="checkbox"/> Soil/Sediment
Starting: _____	_____	<input type="checkbox"/> Wipes	<input type="checkbox"/> Biota (Type): _____
Net (M <sup>3</sup> ) _____	_____	<input type="checkbox"/> Radon Canister	<input checked="" type="checkbox"/> Other: <u>TRITIUM SAMPLE</u>
<input type="checkbox"/> Air Charcoal Cartridge			

## COMMENTS: (Cautions, etc.):

☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

<input type="checkbox"/> Gross Alpha	<input type="checkbox"/> Gross Beta	<input type="checkbox"/> Gamma Scan
<input type="checkbox"/> Total Uranium	<input type="checkbox"/> Total Beta (TSC)	<input type="checkbox"/> NORM (Gamma)
<input type="checkbox"/> Total Radium	<input type="checkbox"/> Tritium ( <sup>3</sup> H)	<input type="checkbox"/> Isotopic Americium / Curium
<input type="checkbox"/> Radium-226	<input type="checkbox"/> Carbon-14	<input type="checkbox"/> Isotopic Plutonium
<input type="checkbox"/> Radium-228	<input type="checkbox"/> Iodine-131	<input type="checkbox"/> Isotopic Thorium
<input type="checkbox"/> Radon-222	<input type="checkbox"/> Strontium-89, 90	<input type="checkbox"/> Isotopic Uranium
<input type="checkbox"/> Other (Specify): _____	<input type="checkbox"/> Nickel-63	<input type="checkbox"/> Iron-55

## CHAIN OF CUSTODY

1. <u>6/8/11</u> Date <u>0900</u> Time Custody Received	<u>TOM HOOK</u> Name (Print) <u>PG&amp;K</u> Organization	<u>[Signature]</u> Signature	<u>6/8/11</u> Date <u>1700</u> Time Custody Released
2. _____ Date _____ Time Custody Received	_____ Name (Print) _____ Organization	_____ Signature	_____ Date _____ Time Custody Released
3. <u>6/9/11</u> Date <u>11:40</u> Time Custody Received	<u>A. JAK</u> Name (Print) <u>DW HUB NR/11</u> Organization	<u>[Signature]</u> Signature	_____ Date _____ Time Custody Released

## LABORATORY REMARKS (Leave Blank)

<b>A. Condition at Time of Receipt:</b>			
<input type="checkbox"/> Acceptable	<input type="checkbox"/> Broken Container	<input type="checkbox"/> Leaked in Transit	<input type="checkbox"/> Improper Container
<input type="checkbox"/> Holding Time Exceeded	<input type="checkbox"/> Sample Not Cooled	<input type="checkbox"/> Insufficient Sample	
<b>B. Preservatives/Carriers:</b>			
<input type="checkbox"/> Added While Sampling	<input type="checkbox"/> Added in Laboratory	<input type="checkbox"/> Not Added	<input type="checkbox"/> Not Applicable

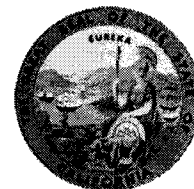


RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0629

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/23/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 06/08/2011 08:52 Date/Time Received: 06/09/2011 11:40

Site Name: Diablo Canyon NPP

Source Name: DCNPP / June 2011

R Number: R91109

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0629-001	Diablo Creek	EPA 901.1	K-40	-19.7 ± 12.0	57.3	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 6/9/11	Lab No. (Leave Blank) N11-0629
	Date & Time Sampled 6/8/11-0852	Serial Number R 91109
<b>Collector Information</b> Name: Tom Hook Dept./Branch: P.O. Box 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DIABLO CREEK Sampling Point (s): 552 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- |  |                 |   |   |
|--|-----------------|---|---|
| <input type="checkbox"/> Air Filters<br>Finishing: _____<br>Starting: _____<br>Net (M <sup>3</sup> ) _____ | Date/Time _____ | <input type="checkbox"/> Seawater<br><input type="checkbox"/> Milk<br><input type="checkbox"/> Wipes<br><input type="checkbox"/> Radon Canister | <input type="checkbox"/> Sludge (Semi-solid Samples)<br><input type="checkbox"/> Soil/Sediment<br><input type="checkbox"/> Biota (Type): _____<br><input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Air Charcoal Cartridge  |                 |   |   |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr  
☐ Rush/Priority (should be prearranged and have supervisory approval)  
☐ Cooled/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Radionuclide(s), if known: \_\_\_\_\_

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input checked="" type="checkbox"/> Isotopic Thorium |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |   |  |   |
|---|--|---|
| 1. Date: 6/8/11<br>Time Custody Received: 0852  | Name (Print): Tom Hook<br>Organization: PG&E<br>Signature: [Signature] | Date: 6/8/11<br>Time Custody Released: 1700 |
| 2. Date: _____<br>Time Custody Received: _____  | Name (Print): _____<br>Organization: _____<br>Signature: _____         | Date: _____<br>Time Custody Released: _____ |
| 3. Date: 6/9/11<br>Time Custody Received: 11:40 | Name (Print): A. TAN<br>Organization: DWRLB<br>Signature: [Signature]  | Date: _____<br>Time Custody Released: _____ |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: 0.02 MR/hr  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0630

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 07/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 06/08/2011 08:52 Date/Time Received: 06/09/2011 11:40

Site Name: Diablo Canyon NPP

Source Name: DCNPP / June 2011

R Number: R92425

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0630-001	Diablo Creek	EPA 906.0	Tritium	-75.3 ± 169	293	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received <u>6/9/11</u>	Lab No. (Leave Blank) <u>N11-0630</u>
	Date & Time Sampled <u>6/8/11-0852</u>	Serial Number <u>R 92425</u>
<b>Collector Information</b> Name: <u>TOM HOOK</u> Dept./Branch: <u>P.O. BOX 56</u> Address: <u>AVILA BEACH, CA 93424</u> Telephone No.: <u>(805) 445-4407</u>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <u>DIABLO CREEK</u> Sampling Point (s): <u>5:52</u> System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters \_\_\_\_\_ Date/Time \_\_\_\_\_ ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ ☐ Milk ☐ Soil/Sediment  
Starting: \_\_\_\_\_ ☒ Wipes ☐ Biota (Type): \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_ ☐ Radon Canister ☒ Other: TRITIUM SAMPLE  
☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

- |   |  |                                 |   |
|---|--|---------------------------------|---|
| 1. <u>6/8/11</u><br>Date<br><u>0852</u><br>Time Custody Received  | <u>TOM HOOK</u><br>Name (Print)<br><u>PG&amp;E</u><br>Organization | <u>[Signature]</u><br>Signature | <u>6/8/11</u><br>Date<br><u>1700</u><br>Time Custody Released |
| 2. _____<br>Date<br>Time Custody Received                         | _____<br>Name (Print)<br>Organization                              | _____<br>Signature              | _____<br>Date<br>Time Custody Released                        |
| 3. <u>6/9/11</u><br>Date<br><u>11:44</u><br>Time Custody Received | <u>LA TAIN</u><br>Name (Print)<br><u>DWRIB</u><br>Organization     | <u>[Signature]</u><br>Signature | _____<br>Date<br>Time Custody Released                        |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable
- 0.02 MR/hr





Howard Backer, MD, MPH  
Interim Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0555

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/01/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 05/11/2011 07:58 Date/Time Received: 05/12/2011 13:15

Site Name: Diablo Canyon NPP

Source Name: DCNPP / May 2011

R Number: R92415

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0555-001	Outfall Water	EPA 901.1	K-40	381 ± 18.0	58.8	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 5/12/11	Lab No. (Leave Blank) NH-0555
	Date & Time Sampled 5/11/11-0758	Serial Number R 92415
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DAPP OUTFALL Sampling Point (s): OUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister ☐ Other: \_\_\_\_\_

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

1. Date: 5/11/11 Time Custody Received: 0758	Name (Print): TOM HOOK Organization: PG&E	Signature: [Signature]	Date: 5/11/11 Time Custody Released: 1700
2. Date: _____ Time Custody Received: _____	Name (Print): _____ Organization: _____	Signature: _____	Date: _____ Time Custody Released: _____
3. Date: 5/12/11 Time Custody Received: 13:15	Name (Print): A. TAN Organization: DWRIB	Signature: [Signature]	Date: _____ Time Custody Released: _____

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0556

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/29/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 05/11/2011 07:58 Date/Time Received: 05/12/2011 13:15

Site Name: Diablo Canyon NPP

Source Name: DCNPP / May 2011

R Number: R92404

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0556-001	Outfall Water	EPA 906.0	Tritium	-149 ± 148	260	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 5/12/11 5/12/11	Lab No. (Leave Blank) N11-0556
	Date & Time Sampled 5/11/11-0758	Serial Number R 92404
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>P.O. Box 56</u> Address: <u>AVILA BEACH, CA 94724</u> Telephone No.: <u>(705) 545-4409</u>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <u>DAPP OUTFALL</u> Sampling Point (s): <u>OUT</u> System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input checked="" type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                              |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input checked="" type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)                      |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |   |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input checked="" type="checkbox"/> Seawater            | <input type="checkbox"/> Sludge (Semi-solid Samples)             |
| Finishing: _____  | _____  | <input checked="" type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment                           |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes                          | <input type="checkbox"/> Biota (Type): _____                     |
| Net (M <sup>3</sup> ) _____   | _____  | <input checked="" type="checkbox"/> Radon Canister      | <input checked="" type="checkbox"/> Other: <u>TRITIUM BOTTLE</u> |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |   |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |  |  |                              |  |
|--|--|------------------------------|--|
| 1. Date <u>5/11/11</u><br>Time Custody Received <u>0758</u>  | Name (Print) <u>Tom Hook</u><br>Organization <u>PL&amp;E</u> | Signature <u>[Signature]</u> | Date <u>5/11/11</u><br>Time Custody Released <u>1700</u> |
| 2. Date _____<br>Time Custody Received _____                 | Name (Print) _____<br>Organization _____                     | Signature _____              | Date _____<br>Time Custody Released _____                |
| 3. Date <u>5/12/11</u><br>Time Custody Received <u>13:15</u> | Name (Print) <u>A. TAN</u><br>Organization <u>DWRLB</u>      | Signature <u>Angela Tan</u>  | Date _____<br>Time Custody Released _____                |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: <0.01MR/hr.
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



Howard Backer, MD, MPH  
Interim Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0546

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/01/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 05/04/2011 09:35 Date/Time Received: 05/05/2011 13:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / May 2011

R Number: R91405

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0546-001	Bio Lab Sink	EPA 901.1	K-40	63.0 ± 16.8	76.3	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received <b>5/5/11</b>	Lab No. (Leave Blank) <b>N11-0546</b>
	Date & Time Sampled <b>5/4/11 0935</b>	Serial Number <b>R 91405</b>
<b>Collector Information</b> Name: <b>TOM HOOK</b> Dept./Branch: <b>P.O. BOX 56</b> Address: <b>AVILA BEACH, CA 93424</b> Telephone No.: <b>(805) 545-4409</b>		
<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:		
<b>Sample Information</b> System Name / Facility: <b>BIO LAB</b> Sampling Point (s): <b>DW1</b> System No.:		
<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____		

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water    ☐ Groundwater    ☐ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time \_\_\_\_\_    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_    ☐ Milk    ☐ Soil/Sediment  
 Starting: \_\_\_\_\_    ☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
 Net (M<sup>3</sup>) \_\_\_\_\_    ☐ Radon Canister    ☐ Other: \_\_\_\_\_
- ☐ Air Charcoal Cartridge

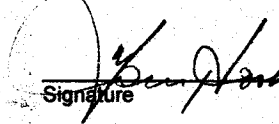
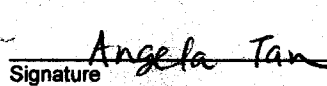
## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_    Iced/Frozen: \_\_\_\_\_    Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☒ Gamma Scan  
☐ Total Uranium    ☐ Total Beta (LSC)    ☐ NORM (Gamma)  
☐ Total Radium    ☐ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☐ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

- |    |   |  |  |   |
|----|---|--|--|---|
| 1. | Date <b>5/4/11</b><br>Time Custody Received <b>0935</b> | Name (Print) <b>TOM HOOK</b><br>Organization <b>PG-E</b> | Signature  | Date <b>5/4/11</b><br>Time Custody Released <b>1300</b> |
| 2. | Date _____<br>Time Custody Received _____               | Name (Print) _____<br>Organization _____                 | Signature _____  | Date _____<br>Time Custody Released _____               |
| 3. | Date <b>5/5/11</b><br>Time Custody Received <b>1300</b> | Name (Print) <b>A. TAN</b><br>Organization <b>DWRLB</b>  | Signature  | Date _____<br>Time Custody Released _____               |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**  
☐ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample
- B. Preservatives/Carriers:**  
☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable
- 40.01 MR/hr**



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0547

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/29/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 05/04/2011 09:35 Date/Time Received: 05/05/2011 13:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / May 2011

R Number: R91497

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0547-001	Bio Lab Sink	EPA 906.0	Tritium	-33.3 ± 151	260	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 5/4/11	Lab No. (Leave Blank) N11-0547
		Date & Time Sampled 5/4/11 0935	Serial Number R 91497
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>P.O. Box 56</u> Address: <u>AULLA BEACH, CA 93424</u> Telephone No.: <u>(805) 545-4409</u>		<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____	
<b>Sample Information</b> System Name / Facility: <u>BIO LAB</u> Sampling Point (s): <u>DW1</u> System No.: _____		<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water    ☐ Groundwater    ☐ Surface Water    ☐ Wastewater  
☒ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time \_\_\_\_\_    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_    ☐ Milk    ☐ Soil/Sediment  
 Starting: \_\_\_\_\_    ☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
 Net (M<sup>3</sup>) \_\_\_\_\_    ☐ Radon Canister    ☒ Other: TRITIUM SAMPLE
- ☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_    Iced/Frozen: \_\_\_\_\_    Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☐ Gamma Scan  
☐ Total Uranium    ☐ Total Beta (ESC)    ☐ NORM (Gamma)  
☐ Total Radium    ☒ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☐ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

- |    |  |   |                              |   |
|----|--|---|------------------------------|---|
| 1. | Date <u>5/4/11</u><br>Time Custody Received <u>0935</u>  | Name (Print) <u>Tom Hook</u><br>Organization <u>P.O. Box 56</u> | Signature <u>[Signature]</u> | Date <u>5/4/11</u><br>Time Custody Released <u>1700</u> |
| 2. | Date <u>5/5/11</u><br>Time Custody Received _____        | Name (Print) <u>A. TAN</u><br>Organization <u>DWRLB</u>         | Signature <u>Angela Tan</u>  | Date _____<br>Time Custody Released _____               |
| 3. | Date <u>5/5/11</u><br>Time Custody Received <u>13:00</u> | Name (Print) <u>A. TAN</u><br>Organization <u>DWRLB</u>         | Signature <u>Angela Tan</u>  | Date _____<br>Time Custody Released _____               |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**  
☐ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample
- B. Preservatives/Carriers:**  
☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable





Howard Backer, MD, MPH  
Interim Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0548

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/01/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 05/04/2011 09:20 Date/Time Received: 05/05/2011 13:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / May 2011

R Number: R91042

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result <math>\pm</math> CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0548-001	Diablo Creek	EPA 901.1	K-40	74.6 $\pm$ 18.0	81.4	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 5/5/11	Lab No. (Leave Blank) N11-0548
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>P.O. Box 50</u> Address: <u>AVILA BEACH, CA 93424</u> Telephone No.: <u>(305) 545-4409</u>		Date & Time Sampled 5/4/11 0920	Serial Number R 91042
<b>Sample Information</b> System Name / Facility: <u>DIABLO CREEK</u> Sampling Point (s): <u>552</u> System No.:		<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____			

## TYPE OF SAMPLE (Check all applicable boxes)

<input type="checkbox"/> Drinking Water	<input type="checkbox"/> Groundwater	<input checked="" type="checkbox"/> Surface Water	<input type="checkbox"/> Wastewater
<input type="checkbox"/> Raw	<input type="checkbox"/> Water Treatment Plant (WTP)	<input type="checkbox"/> Distribution System	<input type="checkbox"/> Point of Use (POU)
<input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted			
<input type="checkbox"/> Air Filters	Date/Time	<input type="checkbox"/> Seawater	<input type="checkbox"/> Sludge (Semi-solid Samples)
Finishing: _____	_____	<input type="checkbox"/> Milk	<input type="checkbox"/> Soil/Sediment
Starting: _____	_____	<input type="checkbox"/> Wipes	<input type="checkbox"/> Biota (Type): _____
Net (M <sup>3</sup> ) _____		<input type="checkbox"/> Radon Canister	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Air Charcoal Cartridge			

## COMMENTS: (Cautions, etc.):

☒ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

<input type="checkbox"/> Gross Alpha	<input type="checkbox"/> Gross Beta	<input checked="" type="checkbox"/> Gamma Scan
<input type="checkbox"/> Total Uranium	<input type="checkbox"/> Total Beta (LSC)	<input type="checkbox"/> NORM (Gamma)
<input type="checkbox"/> Total Radium	<input type="checkbox"/> Tritium (M)	<input type="checkbox"/> Isotopic Americium / Curium
<input type="checkbox"/> Radium-226	<input type="checkbox"/> Carbon-14	<input type="checkbox"/> Isotopic Plutonium
<input type="checkbox"/> Radium-228	<input type="checkbox"/> Iodine-131	<input type="checkbox"/> Isotopic Thorium
<input type="checkbox"/> Radon-222	<input type="checkbox"/> Strontium-89, 90	<input type="checkbox"/> Isotopic Uranium
<input type="checkbox"/> Other (Specify): _____	<input type="checkbox"/> Nickel-63	<input type="checkbox"/> Iron-55

## CHAIN OF CUSTODY

1.	Date <u>5/4/11</u>	Name (Print) <u>Tom Hook</u>	Signature <u>[Signature]</u>	Date <u>5/4/11</u>
	Time Custody Received <u>0920</u>	Organization <u>P.O. Box 50</u>		Time Custody Released <u>1700</u>
2.	Date <u>5/5/11</u>	Name (Print) <u>[Signature]</u>	Signature <u>[Signature]</u>	Date _____
	Time Custody Received <u>13:00</u>	Organization <u>AT&amp;T</u>		Time Custody Released _____
3.	Date <u>5/5/11</u>	Name (Print) <u>DWRIB</u>	Signature <u>Angela Tan</u>	Date _____
	Time Custody Received <u>13:00</u>	Organization <u>DWRIB</u>		Time Custody Released _____

## LABORATORY REMARKS (Leave Blank)

A. Condition at Time of Receipt:  
☐ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample

B. Preservatives/Carriers:  
☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0549

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/29/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 05/04/2011 09:20 Date/Time Received: 05/05/2011 13:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / May 2011

R Number: R90753

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0549-001	Diablo Creek	EPA 906.0	Tritium	-52.9 ± 150	260	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received <u>5/4/11</u>	Lab No. (Leave Blank) <u>N11-0549</u>
		Date & Time Sampled <u>5/4/11 0920</u>	Serial Number <u>R 90753</u>
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>P.O. Box 520</u> Address: <u>AVILA BEACH, CA 93424</u> Telephone No.: <u>(705) 545-4409</u>		<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____	
<b>Sample Information</b> System Name / Facility: <u>DIABLO CREEK</u> Sampling Point (s): <u>SS1</u> System No.: _____		<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water    ☐ Groundwater    ☒ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time \_\_\_\_\_    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_    ☐ Milk    ☐ Soil/Sediment  
 Starting: \_\_\_\_\_    ☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
 Net (M<sup>3</sup>) \_\_\_\_\_    ☐ Radon Canister    ☒ Other: TRITIUM SAMPLE
- ☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_    Cooled/Frozen: \_\_\_\_\_    Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                           | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (SC)                      | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input checked="" type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                            | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                           | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radium-222             | <input type="checkbox"/> Strontium-89, 90                     | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                            | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |    |                                    |                                  |                              |                                   |
|----|------------------------------------|----------------------------------|------------------------------|-----------------------------------|
| 1. | Date <u>5/4/11</u>                 | Name (Print) <u>Tom Hook</u>     | Signature <u>[Signature]</u> | Date <u>5/4/11</u>                |
|    | Time Custody Received <u>0920</u>  | Organization <u>P.O. Box 520</u> |                              | Time Custody Released <u>1700</u> |
| 2. | Date <u>5/5/11</u>                 | Name (Print) <u>A. TAN</u>       | Signature <u>[Signature]</u> | Date _____                        |
|    | Time Custody Received <u>13:00</u> | Organization <u>DWRLB</u>        |                              | Time Custody Released _____       |
| 3. | Date <u>5/5/11</u>                 | Name (Print) <u>A. TAN</u>       | Signature <u>Angela Tan</u>  | Date _____                        |
|    | Time Custody Received <u>13:00</u> | Organization <u>DWRLB</u>        |                              | Time Custody Released _____       |

## LABORATORY REMARKS (Leave Blank)

## A. Condition at Time of Receipt:

- ☐ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample

## B. Preservatives/Carriers:

- ☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable



Howard Backer, MD, MPH  
Interim Director

State of California - Health and Human Services Agency  
California Department of Public Health

**Drinking Water and Radiation Laboratory Branch**

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

**FINAL Analysis Results Report for Task ID. N11-0472**

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/01/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 04/19/2011 07:45 Date/Time Received: 04/20/2011 11:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / April 2011

R Number: R91402

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0472-001	Outfall Water	EPA 901.1	K-40	348 ± 17.3	57.5	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4/20/11	Lab No. (Leave Blank) N11-0472
	Date & Time Sampled 4/19/11 0745	Serial Number R 91402
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 345-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DCPD OUTFALL Sampling Point (s): OUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters \_\_\_\_\_ Date/Time \_\_\_\_\_ ☒ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ ☐ Milk ☐ Soil/Sediment  
Starting: \_\_\_\_\_ ☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_ ☐ Radon Canister ☐ Other: \_\_\_\_\_
- ☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☒ NORM (Gamma)  
☐ Total Radium ☐ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                                |                          |                         |                               |
|----|--------------------------------|--------------------------|-------------------------|-------------------------------|
| 1. | Date<br>4/19/11                | Name (Print)<br>TOM HOOK | Signature<br>           | Date<br>4/19/11               |
|    | Time Custody Received<br>0745  | Organization<br>PSC      |                         | Time Custody Released<br>1700 |
| 2. | Date                           | Name (Print)             | Signature               | Date                          |
|    | Time Custody Received          | Organization             |                         | Time Custody Released         |
| 3. | Date<br>4/20/11                | Name (Print)<br>A. TAN   | Signature<br>Angela Tan | Date                          |
|    | Time Custody Received<br>11:00 | Organization<br>DWR/LB   |                         | Time Custody Released         |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: 40.01 MR/hr
- ☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:
- ☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0474

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 07/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 04/19/2011 07:45 Date/Time Received: 04/20/2011 11:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / April 2011

R Number: R91115

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0474-001	Outfall Water	EPA 906.0	Tritium	-33.2 ± 170	293	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4/20/11	Lab No. (Leave Blank) N11-0474
	Date & Time Sampled 4/19/11 0745	Serial Number R 91115
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 50 Address: AVILA BEACH, CA 9424 Telephone No.: (352) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DCP OUTFALL Sampling Point (s): OUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                        |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)                |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples)       |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment                     |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____               |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input checked="" type="checkbox"/> Other: TITANIUM SAMPLE |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Cooled/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                           | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (SC)                      | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input checked="" type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                            | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                           | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90                     | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                            | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

1. Date 4/19/11 Time Custody Received 0745	Name (Print) TOM HOOK Organization P.O. BOX 50	Signature <i>[Signature]</i>	Date 4/19/11 Time Custody Released 0745-1700
2. Date Time Custody Received	Name (Print) Organization	Signature	Date Time Custody Released
3. Date 4/20/11 Time Custody Received 11:00	Name (Print) A. TAN Organization DWRIB	Signature <i>[Signature]</i>	Date Time Custody Released

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



## Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940

### FINAL Analysis Results Report for Task ID. N11-0449

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/01/2011

#### Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

#### Site and Sample Information

Collector's Name: Rick Treinen

Date/Time Collected: 04/18/2011 09:10 Date/Time Received: 04/19/2011 09:20

Site Name: Diablo Canyon NPP

Source Name: DCNPP / April 2011

R Number: R91108

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0449-001	Bio Lab Sink	EPA 901.1	K-40	23.7 ± 17.4	80.5	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4/19/11	Lab No. (Leave Blank) N11-0449
	Date & Time Sampled 4/18/11 0910	Serial Number R 91108
<b>Collector Information</b> Name: Rick Treinen Dept./Branch: PO Box 56 Address: Avila Beach, CA 93424 Telephone No.: 805-545-6481	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: BIO LAB Sampling Point (s): DW1 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water    ☐ Groundwater    ☐ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_    ☐ Milk    ☐ Soil/Sediment  
 Starting: \_\_\_\_\_    ☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
 Net (M<sup>3</sup>) \_\_\_\_\_    ☐ Radon Canister    ☐ Other: \_\_\_\_\_
- ☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_    Cooled/Frozen: \_\_\_\_\_    Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☒ Gamma Scan  
☐ Total Uranium    ☐ Total Beta (LSC)    ☐ NORM (Gamma)  
☐ Total Radium    ☐ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☐ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                         |                                      |                    |                         |
|----|-------------------------|--------------------------------------|--------------------|-------------------------|
| 1. | Date<br>4/18/11<br>0910 | Name (Print)<br>Rick Treinen<br>PG#E | Signature<br>      | Date<br>4/18/11<br>1700 |
| 2. | Date<br>_____           | Name (Print)<br>_____                | Signature<br>_____ | Date<br>_____           |
| 3. | Date<br>4/19/11<br>0920 | Name (Print)<br>A. TAN<br>DWRLB      | Signature<br>      | Date<br>_____           |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**  
☐ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample
- B. Preservatives/Carriers:**  
☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0450

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/29/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Rick Treinen

Date/Time Collected: 04/18/2011 09:00 Date/Time Received: 04/19/2011 09:20

Site Name: Diablo Canyon NPP

Source Name: DCNPP / April 2011

R Number: R91121

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0450-001	Bio Lab Sink	EPA 906.0	Tritium	-25.5 ± 151	260	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4/19/11	Lab No. (Leave Blank) N11-0450
	Date & Time Sampled 4/18/11 0900	Serial Number R 91121
<b>Collector Information</b> Name: Rick Treinen Dept./Branch: PG Box 56 Address: Avila Beach, CA 93424 Telephone No.: 805-545-6481	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: BIO LAB Sampling Point (s): DW1 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters \_\_\_\_\_ Date/Time \_\_\_\_\_ ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ ☐ Milk ☐ Soil/Sediment  
Starting: \_\_\_\_\_ ☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_ ☐ Radon Canister ☒ Other: Tritium Sample  
☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Vial/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                           | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)                     | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input checked="" type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                            | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                           | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90                     | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                            | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

1. Date 4/18/11 Time Custody Received 0900	Name (Print) Rick Treinen Organization PG&E	Signature [Signature]	Date 4/18/11 Time Custody Released 1700
2. Date _____ Time Custody Received _____	Name (Print) _____ Organization _____	Signature _____	Date _____ Time Custody Released _____
3. Date 4/19/11 Time Custody Received 09:20	Name (Print) A. TAN Organization DWRLB	Signature Angela Tan	Date _____ Time Custody Released _____

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: < 0.01 MR/hy
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



Howard Backer, MD, MPH  
Interim Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

**FINAL Analysis Results Report for Task ID. N11-0451**

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/01/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Rick Treinen

Date/Time Collected: 04/18/2011 09:00 Date/Time Received: 04/19/2011 09:00

Site Name: Diablo Canyon NPP

Source Name: DCNPP / April 2011

R Number: R91040

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0451-001	Diablo Creek	EPA 901.1	K-40	0.149 ± 11.9	56.2	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4/19/11	Lab No. (Leave Blank) N11-0451
	Date & Time Sampled 4/18/11 0900	Serial Number R 91040
<b>Collector Information</b> Name: ORLANDO SABI Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA. 93424 Telephone No.: 805-545-4415	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DIABLO CREEK Sampling Point (s): 552 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input checked="" type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System      | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |   |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater                 | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                     | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes                    | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister           | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |   |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Acid/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input checked="" type="checkbox"/> Gross Beta     | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

1. Date 4/18/11 Time Custody Received 09:20	Name (Print) ORLANDO SABI Organization PG&E	Signature [Signature]	Date 4/18/11 Time Custody Released 1700
2. Date Time Custody Received	Name (Print) DWRLB Organization	Signature Angela Tan	Date Time Custody Released
3. Date 4/19/11 Time Custody Received 09:20	Name (Print) A. TAN Organization DWRLB	Signature Angela Tan	Date Time Custody Released

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



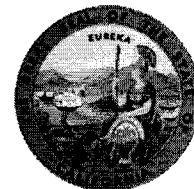
RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0452

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 07/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Orlando Sabi

Date/Time Collected: 04/18/2011 09:00 Date/Time Received: 04/19/2011 09:20

Site Name: Diablo Canyon NPP

Source Name: DCNPP / April 2011

R Number: R91114

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0452-001	Diablo Creek	EPA 906.0	Tritium	-108 ± 168	293	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 4/18/11	Lab No. (Leave Blank) N11-0452
	Date & Time Sampled 4/18/11 0900	Serial Number R 91114
<b>Collector Information</b> Name: ORLANDO SABI Dept./Branch: P.O. Box 56 Address: AVILA BEACH, CA. 93424 Telephone No.: _____	<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____	
<b>Sample Information</b> System Name / Facility: DIABLO CREEK Sampling Point (s): 552 System No.: _____	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge
- ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister ☐ Other: \_\_\_\_\_

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr  
☐ Rush/Priority (should be prearranged and have supervisory approval)
- ☐ Field/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Radionuclide(s), if known: \_\_\_\_\_

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan  
☐ Total Uranium ☐ Total Beta (ES) ☐ NORM (Gamma)  
☐ Total Radium ☒ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

1. Date 4/18/11 Time Custody Received 0900	Name (Print) ORLANDO SABI Organization PG&E	Signature 	Date 4/18/11 Time Custody Released 1700
2. Date _____ Time Custody Received _____ Date _____ Time Custody Released _____	Name (Print) _____ Organization _____	Signature _____ Signature _____	Date _____ Time Custody Released _____
3. Date 4/19/11 Time Custody Received 0900	Name (Print) ANGELA TAN Organization DWR/RIB	Signature 	Date _____ Time Custody Released _____

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable



**Drinking Water and Radiation Laboratory Branch**

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

**FINAL Analysis Results Report for Task ID. N11-0313**

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 06/01/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Orlando Sabi

Date/Time Collected: 03/23/2011 10:35 Date/Time Received: 03/24/2011 11:40

Site Name: Diablo Canyon NPP

Source Name: DCNPP / March 2011

R Number: R91493

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0313-001	Outfall Water	EPA 901.1	K-40	388 ± 22.2	83.6	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 3/24/11	Lab No. (Leave Blank) N11-0313
	Date & Time Sampled 3/23/11 1035	Serial Number R 91493
<b>Collector Information</b> Name: ORLANDO SABI Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA. 93424 Telephone No.: (805) 545-4415	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DCPD OUTFALL Sampling Point (s): OUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ ☐ Milk ☐ Soil/Sediment  
Starting: \_\_\_\_\_ ☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
Net (M<sup>3</sup>): \_\_\_\_\_ ☐ Radon Canister ☐ Other: \_\_\_\_\_  
☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Used/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

- |  |  |                       |  |
|--|--|-----------------------|--|
| 1. Date 3/23/11<br>Time Custody Received 1035  | Name (Print) ORLANDO SABI<br>Organization PG & E | Signature [Signature] | Date 3/23/11<br>Time Custody Released 1700 |
| 2. Date<br>Time Custody Received               | Name (Print)<br>Organization                     | Signature             | Date<br>Time Custody Released              |
| 3. Date 3/24/11<br>Time Custody Received 11:40 | Name (Print) A. TAN<br>Organization DWRLB        | Signature Angela Tan  | Date<br>Time Custody Released              |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable

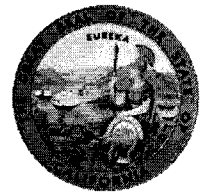


RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0314

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 07/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Orlando Sabi

Date/Time Collected: 03/23/2011 10:35 Date/Time Received: 03/24/2011 11:40

Site Name: Diablo Canyon NPP

Source Name: DCNPP / March 2011

R Number: R91034

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0314-001	Outfall Water	EPA 906.0	Tritium	-120 ± 168	293	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 3/24/11	Lab No. (Leave Blank) N11-0314
	Date & Time Sampled 3/23/11 1035	Serial Number R 91034
<b>Collector Information</b> Name: ORLANDO SABI Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA. 93424 Telephone No.: (905) 545-4415	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DCPD OUTFALL Sampling Point (s): OUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Date/Time ☒ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ ☐ Milk ☐ Soil/Sediment  
Starting: \_\_\_\_\_ ☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_ ☐ Radon Canister ☒ Other: TRITIUM SAMPLE
- ☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Cooled/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: Est Poly  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

1. <u>3/23/11</u> Date <u>1035</u> Time Custody Received	<u>ORLANDO SABI</u> Name (Print) <u>CHD POYE</u> Organization <u>11 25 11</u> Signature	<u>3/23/11</u> Date <u>1700</u> Time Custody Released
2. _____ Date Time Custody Received	_____ Name (Print) Organization Signature	_____ Date Time Custody Released
3. <u>3/24/11</u> Date <u>11140</u> Time Custody Received	<u>A. TAN</u> Name (Print) <u>DWRLB</u> Organization <u>Angela Tan</u> Signature	_____ Date Time Custody Released

## LABORATORY REMARKS (Leave Blank)

## A. Condition at Time of Receipt:

- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |

## B. Preservatives/Carriers:

- |   |  |   |   |
|---|--|---|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input checked="" type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|---|---|

## Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

### FINAL Analysis Results Report for Task ID. N11-0274

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 05/26/2011

#### Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

#### Site and Sample Information

Collector's Name: Tom Hook

Date/Time Collected: 03/15/2011 07:46 Date/Time Received: 03/16/2011 11:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / March 2011

R Number: R91041

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result <math>\pm</math> CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0274-001	Bio Lab Sink	EPA 901.1	K-40	4.37 $\pm$ 17.0	79.5	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911		Date Received 3/16/11	Lab No. (Leave Blank) N11-0274
		Date & Time Sampled 3/15/11 - 0746	Serial Number R 91041
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. Box 56 Address: AVILA BEACH CA 93424 Telephone No.: (805) 545-4409		<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____	
<b>Sample Information</b> System Name / Facility: BIO LAB Sampling Point (s): DW1 System No.: _____		<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water    ☐ Groundwater    ☐ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time: \_\_\_\_\_    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_    ☐ Milk    ☐ Soil/Sediment  
 Starting: \_\_\_\_\_    ☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
 Net (M<sup>3</sup>): \_\_\_\_\_    ☒ Radon Canister    ☐ Other: \_\_\_\_\_  
☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_    Cooled/Frozen: \_\_\_\_\_    Other: \_\_\_\_\_  
☒ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☒ Gamma Scan  
☐ Total Uranium    ☐ Total Beta (ESC)    ☐ NORM (Gamma)  
☐ Total Radium    ☐ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☐ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                              |                        |                        |                              |
|----|------------------------------|------------------------|------------------------|------------------------------|
| 1. | Date: 3/15/11                | Name (Print): TOM HOOK | Signature: [Signature] | Date: 3/15/11                |
|    | Time Custody Received: 0746  | Organization: PG&E     |                        | Time Custody Released: 1700  |
| 2. | Date: _____                  | Name (Print): _____    | Signature: _____       | Date: _____                  |
|    | Time Custody Received: _____ | Organization: _____    |                        | Time Custody Released: _____ |
| 3. | Date: 3/16/11                | Name (Print): A TAN    | Signature: [Signature] | Date: _____                  |
|    | Time Custody Received: 11:30 | Organization: DWRLB    |                        | Time Custody Released: _____ |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**  
☐ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample
- B. Preservatives/Carriers:**  
☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0275

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 07/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 03/15/2011 07:46 Date/Time Received: 03/16/2011 11:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / March 2011

R Number: R91029

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0275-001	Bio Lab Sink	EPA 906.0	Tritium	-26.6 ± 170	293	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 3/16/11	Lab No. (Leave Blank) N11-0275
	Date & Time Sampled 3/15/11 - 0746	Serial Number R 91029
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 93424 Telephone No.: 1805-545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: BIO LAB Sampling Point (s): DW1 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

<input checked="" type="checkbox"/> Drinking Water	<input type="checkbox"/> Groundwater	<input type="checkbox"/> Surface Water	<input type="checkbox"/> Wastewater
<input type="checkbox"/> Raw	<input type="checkbox"/> Water Treatment Plant (WTP)	<input type="checkbox"/> Distribution System	<input type="checkbox"/> Point of Use (POU)
<input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted			
<input type="checkbox"/> Air Filters	Date/Time	<input type="checkbox"/> Seawater	<input type="checkbox"/> Sludge (Semi-solid Samples)
Finishing: _____	_____	<input type="checkbox"/> Milk	<input type="checkbox"/> Soil/Sediment
Starting: _____	_____	<input type="checkbox"/> Wipes	<input type="checkbox"/> Biota (Type): _____
Net (M <sup>3</sup> ) _____	_____	<input type="checkbox"/> Radon Canister	<input checked="" type="checkbox"/> Other: TRITIUM SAMPLE
<input type="checkbox"/> Air Charcoal Cartridge			

## COMMENTS: (Cautions, etc.):

<input type="checkbox"/> Field Treatment: Preservatives added: _____	<input type="checkbox"/> Iced/Frozen: _____	<input type="checkbox"/> Other: _____
<input type="checkbox"/> Field Measurement: _____ mR/hr	<input type="checkbox"/> Radionuclide(s), if known: _____	
<input type="checkbox"/> Rush/Priority (should be prearranged and have supervisory approval)		

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

<input type="checkbox"/> Gross Alpha	<input type="checkbox"/> Gross Beta	<input type="checkbox"/> Gamma Scan
<input type="checkbox"/> Total Uranium	<input type="checkbox"/> Total Beta (ESC)	<input type="checkbox"/> NORM (Gamma)
<input type="checkbox"/> Total Radium	<input type="checkbox"/> Tritium ( <sup>3</sup> H)	<input type="checkbox"/> Isotopic Americium / Curium
<input type="checkbox"/> Radium-226	<input type="checkbox"/> Carbon-14	<input type="checkbox"/> Isotopic Plutonium
<input type="checkbox"/> Radium-228	<input type="checkbox"/> Iodine-131	<input type="checkbox"/> Isotopic Thorium
<input type="checkbox"/> Radon-222	<input type="checkbox"/> Strontium-89, 90	<input type="checkbox"/> Isotopic Uranium
<input type="checkbox"/> Other (Specify): _____	<input type="checkbox"/> Nickel-63	<input type="checkbox"/> Iron-55

## CHAIN OF CUSTODY

1. Date: 3/15/11 Time Custody Received: 0746	Name (Print): TOM HOOK Signature: [Signature]	Date: 3/15/11 Time Custody Released: 1700
2. Date: _____ Time Custody Received: _____	Name (Print): _____ Signature: _____	Date: _____ Time Custody Released: _____
3. Date: 3/16/11 Time Custody Received: 3/16/11 11:30	Organization: A. TAN Name (Print): DWRLB Signature: Angela Tan	Date: _____ Time Custody Released: _____

## LABORATORY REMARKS (Leave Blank)

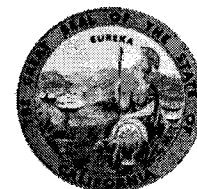
<b>A. Condition at Time of Receipt:</b> <input type="checkbox"/> Acceptable <input type="checkbox"/> Holding Time Exceeded	<input type="checkbox"/> Broken Container <input type="checkbox"/> Sample Not Cooled	<input type="checkbox"/> Leaked in Transit <input type="checkbox"/> Insufficient Sample	<input type="checkbox"/> Improper Container
<b>B. Preservatives/Carriers:</b> <input type="checkbox"/> Added While Sampling	<input type="checkbox"/> Added in Laboratory	<input type="checkbox"/> Not Added	<input type="checkbox"/> Not Applicable



## Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

### FINAL Analysis Results Report for Task ID. N11-0276

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 05/26/2011

#### Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

#### Site and Sample Information

Collector's Name: Tom Hook

Date/Time Collected: 03/15/2011 07:35 Date/Time Received: 03/16/2011 11:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / March 2011

R Number: R91427

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0276-001	Diablo Creek	EPA 901.1	K-40	-10.5 ± 12.1	57.5	pCi/L

1. Precision criteria for these methods were determined to be acceptable.  
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980  
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 3/16/11	Lab No. (Leave Blank) N11-0276
	Date & Time Sampled 3/15/11 - 0735	Serial Number R 91427
<b>Collector Information</b> Name: <u>Tom Hook</u> Dept./Branch: <u>P.O. Box 56</u> Address: <u>AVILA BEACH, CA 93424</u> Telephone No.: <u>(805) 545-4409</u>	<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____	
<b>Sample Information</b> System Name / Facility: <u>DIABLO CREEK</u> Sampling Point (s): <u>552</u> System No.: _____	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input checked="" type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input checked="" type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |   |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater                       | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                           | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes                          | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister                 | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |   |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (TSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |  |  |   |  |                                 |
|--|--|---|--|---------------------------------|
| 1. <u>3/15/11</u><br>Date<br><u>0735</u><br>Time Custody Received  | <u>Tom Hook</u><br>Name (Print)<br><u>PG&amp;E</u><br>Organization | <u>[Signature]</u><br>Signature<br><u>3/15/11</u> | <u>3/15/11</u><br>Date<br><u>0700</u><br>Time Custody Released | <u>N11-0276</u><br><u>R 914</u> |
| 2. _____<br>Date<br>_____ Time Custody Received                    | _____<br>Name (Print)<br>_____<br>Organization                     | _____<br>Signature                                | _____<br>Date<br>_____ Time Custody Released                   |                                 |
| 3. <u>3/16/11</u><br>Date<br><u>11:30</u><br>Time Custody Received | <u>A. TAN</u><br>Name (Print)<br><u>DWRB</u><br>Organization       | <u>[Signature]</u><br>Signature                   | _____<br>Date<br>_____ Time Custody Released                   |                                 |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0278

Analyst: Malkiat Gohal

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 07/07/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 03/15/2011 07:35 Date/Time Received: 03/16/2011 11:30

Site Name: Diablo Canyon NPP

Source Name: DCNPP / March 2011

R Number: R91030

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0278-001	Diablo Creek	EPA 906.0	Tritium	-199 ± 166	293	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 3/16/11	Lab No. (Leave Blank) N11-0278
	Date & Time Sampled 3/15/11 - 0735	Serial Number R 91030
<b>Collector Information</b> Name: <u>TOM Hook</u> Dept./Branch: <u>PO Box 56</u> Address: <u>Avila Beach, CA 93424</u> Telephone No.: <u>805-545-4409</u>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <u>Diablo Creek</u> Sampling Point (s): <u>552</u> System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |   |  |
|---|--|---|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input checked="" type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater                              |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System      | <input type="checkbox"/> Point of Use (POU)                      |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |   |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater                 | <input type="checkbox"/> Sludge (Semi-solid Samples)             |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                     | <input type="checkbox"/> Soil/Sediment                           |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes                    | <input type="checkbox"/> Biota (Type): _____                     |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister           | <input checked="" type="checkbox"/> Other: <u>Tritium Sample</u> |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |   |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Cooled/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |  |  |                              |  |
|--|--|------------------------------|--|
| 1. Date <u>3/15/11</u><br>Time Custody Received <u>0735</u>  | Name (Print) <u>TOM Hook</u><br>Organization <u>PG&amp;E</u> | Signature <u>[Signature]</u> | Date <u>3/15/11</u><br>Time Custody Released <u>1700</u> |
| 2. Date _____<br>Time Custody Received _____                 | Name (Print) _____<br>Organization _____                     | Signature _____              | Date _____<br>Time Custody Released _____                |
| 3. Date <u>3/16/11</u><br>Time Custody Received <u>11:30</u> | Name (Print) <u>ANGELA TAN</u><br>Organization <u>DWR/LB</u> | Signature <u>Angela Tan</u>  | Date _____<br>Time Custody Released _____                |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



MARK B. HORTON, MD, MSPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN, JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0225

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/11/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 02/24/2011 07:52 Date/Time Received: 02/28/2011 14:39

Site Name: Diablo Canyon NPP

Source Name: DCNPP / February 2011

R Number: R91490

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0225-001	Outfall Water	EPA 901.1	K-40	336 ± 17.3	59.1	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 2/28/11	Lab No. (Leave Blank) N11-0225
	Date & Time Sampled 2/24/11-0752	Serial Number R 91490
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 576 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DCPD OUTFALL Sampling Point (s): OUT System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

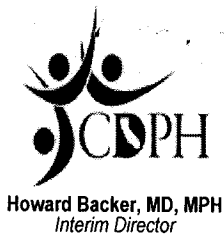
- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |                              |                        |                        |                              |
|------------------------------|------------------------|------------------------|------------------------------|
| 1. Date: 2/24/11             | Name (Print): TOM HOOK | Signature: [Signature] | Date: 2/24/11                |
| Time Custody Received: 0752  | Organization: PG&E     |                        | Time Custody Released: 1700  |
| 2. Date: _____               | Name (Print): _____    | Signature: _____       | Date: _____                  |
| Time Custody Received: _____ | Organization: _____    |                        | Time Custody Released: _____ |
| 3. Date: 2/28/11             | Name (Print): A. TAN   | Signature: [Signature] | Date: _____                  |
| Time Custody Received: 13:00 | Organization: SCLB N11 | Signature: Angela Tan  | Time Custody Released: _____ |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: < 0.01 mR/hr
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0226

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 05/25/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 02/24/2011 07:52 Date/Time Received: 02/28/2011 14:41

Site Name: Diablo Canyon NPP

Source Name: DCNPP / February 2011

R Number: R91437

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result <math>\pm</math> CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0226-001	Outfall Water	EPA 906.0	Tritium	80.3 $\pm$ 153	260	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received 2/22/11	Lab No. (Leave Blank) N11-0226
	Date & Time Sampled 2/24/11-0752	Serial Number R 91437
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. BOX 56 Address: AVILA BEACH, CA 94924 Telephone No.: 1305-245-4409		
<b>Reporting Information</b> Name: _____ Dept./Branch: _____ Address: _____ Telephone No.: _____		
<b>Sample Information</b> System Name / Facility: DCPD OUTFALL Sampling Point (s): OUT System No.: _____		
<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____		

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water    ☐ Groundwater    ☐ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time \_\_\_\_\_    ☒ Seawater    ☐ Sludge (Semi-solid Samples)  
 Finishing: \_\_\_\_\_    ☐ Milk    ☐ Soil/Sediment  
 Starting: \_\_\_\_\_    ☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
 Net (M<sup>2</sup>) \_\_\_\_\_    ☐ Radon Canister    ☒ Other: TRITIUM BOTTLE  
☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_    Cooled/Frozen: \_\_\_\_\_    Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☒ Gamma Scan  
☐ Total Uranium    ☐ Total Beta (ESC)    ☐ NORM (Gamma)  
☐ Total Radium    ☐ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☐ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                                |                          |                                 |                               |
|----|--------------------------------|--------------------------|---------------------------------|-------------------------------|
| 1. | Date<br>2/24/11                | Name (Print)<br>TOM HOOK | Signature<br><i>[Signature]</i> | Date<br>2/24/11               |
|    | Time Custody Received<br>0752  | Organization<br>PGE      | Signature                       | Time Custody Released<br>1700 |
| 2. | Date                           | Name (Print)             | Signature                       | Date                          |
|    | Time Custody Received          | Organization             | Signature                       | Time Custody Released         |
| 3. | Date<br>2/25/11                | Name (Print)<br>A. TAN   | Signature<br><i>[Signature]</i> | Date                          |
|    | Time Custody Received<br>13:00 | Organization<br>SRUB-N   | Signature                       | Time Custody Released         |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:**  
☐ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample
- B. Preservatives/Carriers:**  
☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable





MARK B. HORTON, MD, MSPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN, JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0187

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/11/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 02/16/2011 09:35 Date/Time Received: 02/28/2011 09:06

Site Name: Diablo Canyon NPP

Source Name: DCNPP / February 2011

R Number: R91491

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result <math>\pm</math> CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0187-001	Diablo Creek	EPA 901.1	K-40	6.89 $\pm$ 17.0	79.4	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received	Lab No. (Leave Blank) N11-0187
	Date & Time Sampled 2/16/11 0935	Serial Number R 91491
<b>Collector Information</b> Name: Tom Hook Dept./Branch: PO Box 56 Address: Avila Beach, CA 93424 Telephone No.: 805-545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: Diablo Creek Sampling Point (s): System No.: 552	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water    ☐ Groundwater    ☒ Surface Water    ☐ Wastewater  
☒ Raw    ☐ Water Treatment Plant (WTP)    ☒ Distribution System    ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxizone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge    ☐ Milk    ☐ Soil/Sediment  
☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister    ☐ Other: \_\_\_\_\_

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Ice/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha    ☐ Gross Beta    ☒ Gamma Scan  
☐ Total Uranium    ☐ Total Beta (LSC)    ☐ NORM (Gamma)  
☐ Total Radium    ☐ Tritium (<sup>3</sup>H)    ☐ Isotopic Americium / Curium  
☐ Radium-226    ☐ Carbon-14    ☐ Isotopic Plutonium  
☐ Radium-228    ☐ Iodine-131    ☐ Isotopic Thorium  
☐ Radon-222    ☐ Strontium-89, 90    ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_    ☐ Nickel-63    ☐ Iron-55

## CHAIN OF CUSTODY

- |    |  |  |               |  |
|----|--|--|---------------|--|
| 1. | Date<br>2/16/11<br>Time Custody Received<br>0935 | Name (Print)<br>Rick Treiman<br>Organization<br>PG&E | Signature<br> | Date<br>2/16/11<br>Time Custody Released<br>1700 |
| 2. | Date<br>Time Custody Received                    | Name (Print)<br>Organization                         | Signature<br> | Date<br>Time Custody Released                    |
| 3. | Date<br>Time Custody Received                    | Name (Print)<br>Organization                         | Signature<br> | Date<br>Time Custody Released                    |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: 0.01 MR/hr  
☐ Acceptable    ☐ Broken Container    ☐ Leaked in Transit    ☐ Improper Container  
☐ Holding Time Exceeded    ☐ Sample Not Cooled    ☐ Insufficient Sample
- B. Preservatives/Carriers: 0.01 MR/hr  
☐ Added While Sampling    ☐ Added in Laboratory    ☐ Not Added    ☐ Not Applicable

## Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

### FINAL Analysis Results Report for Task ID. N11-0188

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 05/25/2011

#### Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

#### Site and Sample Information

Collector's Name: Tom Hook

Date/Time Collected: 02/16/2011 09:35 Date/Time Received: 02/28/2011 09:09

Site Name: Diablo Canyon NPP

Source Name: DCNPP / February 2011

R Number: R91499

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0188-001	Diablo Creek	EPA 906.0	Tritium	-63.5 ± 150	260	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received	Lab No. (Leave Blank) <b>N11-0188</b>
	Date & Time Sampled <b>2/16/11 0935</b>	Serial Number <b>R 91499</b>
<b>Collector Information</b> Name: <b>Tom Hook</b> Dept./Branch: <b>PO Box 56</b> Address: <b>Avila Beach, CA 93424</b> Telephone No.: <b>805-543-4409</b>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <b>DIABLO CREEK</b> Sampling Point (s): System No.: <b>552</b>	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge ☐ Milk ☐ Soil/Sediment  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
☒ Other: **Tritium Sample**

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ (Ced/Frozen: \_\_\_\_\_) Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                           | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)                     | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input checked="" type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                            | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                           | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90                     | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                            | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

1.	Date <b>2/16/11</b>	Name (Print) <b>Rich Treinen</b>	Signature <i>[Signature]</i>	Date <b>2/16/11</b>
	Time Custody Received <b>0935</b>	Organization <b>PO Box 56</b>		Time Custody Released <b>1700</b>
2.	Date	Name (Print)	Signature	Date
	Time Custody Received	Organization		Time Custody Released
3.	Date	Name (Print)	Signature	Date
	Time Custody Received	Organization		Time Custody Released

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



MARK B. HORTON, MD, MSPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN, JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0189

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/11/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 02/16/2011 09:45 Date/Time Received: 02/28/2011 09:11

Site Name: Diablo Canyon NPP

Source Name: DCNPP / February 2011

R Number: R90934

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0189-001	Bio Lab Sink	EPA 901.1	K-40	-39.6 ± 14.7	72.0	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received	Lab No. (Leave Blank) N11-0189
	Date & Time Sampled 2/16/11 0945	Serial Number R 90934
<b>Collector Information</b> Name: Tom Hook Dept./Branch: PO Box 56 Address: Avila Beach, CA 93424 Telephone No.: 805-545-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: BIO LAB Sampling Point (s): DW1 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input checked="" type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water    ☐ Groundwater    ☐ Surface Water    ☐ Wastewater  
☐ Raw    ☐ Water Treatment Plant (WTP)    ☐ Distribution System    ☐ Point of Use (POU)
- ☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters    Date/Time    ☐ Seawater    ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_  
Starting: \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Air Charcoal Cartridge    ☐ Milk    ☐ Soil/Sediment  
☐ Wipes    ☐ Biota (Type): \_\_\_\_\_  
☐ Radon Canister    ☐ Other: \_\_\_\_\_

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_    Cooled/Frozen: \_\_\_\_\_    Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr    ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |    |                               |                              |               |                               |
|----|-------------------------------|------------------------------|---------------|-------------------------------|
| 1. | Date<br>2/16/11               | Name (Print)<br>Rick Treinen | Signature<br> | Date<br>2/16/11               |
|    | Time Custody Received<br>0945 | Organization<br>PG&E         |               | Time Custody Released<br>1700 |
| 2. | Date                          | Name (Print)                 | Signature     | Date                          |
|    | Time Custody Received         | Organization                 |               | Time Custody Released         |
| 3. | Date                          | Name (Print)                 | Signature     | Date                          |
|    | Time Custody Received         | Organization                 |               | Time Custody Released         |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: 0.01 MR/hr
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|

## Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

### FINAL Analysis Results Report for Task ID. N11-0190

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 05/25/2011

#### Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

#### Site and Sample Information

Collector's Name: Tom Hook

Date/Time Collected: 02/16/2011 09:45 Date/Time Received: 02/28/2011 09:14

Site Name: Diablo Canyon NPP

Source Name: DCNPP / February 2011

R Number: R91496

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0190-001	Bio Lab Sink	EPA 906.0	Tritium	-93.3 ± 149	260	pCi/L

1. Precision criteria for these methods were determined to be acceptable.  
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980  
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received	Lab No. (Leave Blank) N11-0190
	Date & Time Sampled 2/16/11 0945	Serial Number R 91496
<b>Collector Information</b> Name: Tom Hook Dept./Branch: PO Box 56 Address: Avila Beach, CA 93424 Telephone No.: 805-545-4404	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: BIOLAB Sampling Point (s): DW1 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |   |   |
|---|--|---|---|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input checked="" type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater                       |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System      | <input type="checkbox"/> Point of Use (POU)               |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |   |   |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater                 | <input type="checkbox"/> Sludge (Semi-solid Samples)      |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                     | <input type="checkbox"/> Soil/Sediment                    |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes                    | <input type="checkbox"/> Biota (Type): _____              |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister           | <input checked="" type="checkbox"/> Other: Tritium Sample |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |   |   |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                           | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (TSC)                     | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input checked="" type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                            | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                           | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90                     | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                            | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |    |                              |                            |                        |                              |
|----|------------------------------|----------------------------|------------------------|------------------------------|
| 1. | Date: 2/16/11                | Name (Print): Rich Treinen | Signature: [Signature] | Date: 2/16/11                |
|    | Time Custody Received: 0945  | Organization: PG&E         |                        | Time Custody Released: 1700  |
| 2. | Date: _____                  | Name (Print): _____        | Signature: _____       | Date: _____                  |
|    | Time Custody Received: _____ | Organization: _____        |                        | Time Custody Released: _____ |
| 3. | Date: _____                  | Name (Print): _____        | Signature: _____       | Date: _____                  |
|    | Time Custody Received: _____ | Organization: _____        |                        | Time Custody Released: _____ |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|





RON CHAPMAN, MD, MPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0161

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/11/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 01/25/2011 07:45 Date/Time Received: 02/25/2011 10:29

Site Name: Diablo Canyon NPP

Source Name: DCNPP / January 2011

R Number: R91514

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0161-001	Outfall Water	EPA 901.1	K-40	344 ± 23.5	87.7	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received	Lab No. (Leave Blank) <b>N10-0161</b>
	Date & Time Sampled <b>1/25/11 - 0745</b>	Serial Number <b>R 91514</b>
<b>Collector Information</b> Name: <b>TOM HOOK</b> Dept./Branch: <b>P2 BOX 50</b> Address: <b>AVALA BEACH, CA 93424</b> Telephone No.: <b>(205) 545-4409</b>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <b>DCPP OUTFALL</b> Sampling Point (s): <b>OUT</b> System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                  |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)          |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples) |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment               |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____         |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input type="checkbox"/> Other: _____                |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (ESC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |                                      |                                  |                                 |                                      |
|--------------------------------------|----------------------------------|---------------------------------|--------------------------------------|
| 1. <u>1/25/11</u><br>Date            | <u>TOM HOOK</u><br>Name (Print)  | <u>[Signature]</u><br>Signature | <u>1/25/11</u><br>Date               |
| <u>0745</u><br>Time Custody Received | <u>P2 BOX 50</u><br>Organization |                                 | <u>1700</u><br>Time Custody Released |
| 2. _____<br>Date                     | _____<br>Name (Print)            | _____<br>Signature              | _____<br>Date                        |
| _____<br>Time Custody Received       | _____<br>Organization            | _____<br>Signature              | _____<br>Time Custody Released       |
| 3. _____<br>Date                     | _____<br>Name (Print)            | _____<br>Signature              | _____<br>Date                        |
| _____<br>Time Custody Received       | _____<br>Organization            | _____<br>Signature              | _____<br>Time Custody Released       |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: **0.01 MR/hr**
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|

## Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940

### FINAL Analysis Results Report for Task ID. N11-0162

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 05/25/2011

#### Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

#### Site and Sample Information

Collector's Name: Tom Hook

Date/Time Collected: <sup>01</sup>02/25/2011 07:45 Date/Time Received: 02/25/2011 10:32

Site Name: Diablo Canyon NPP

Source Name: DCNPP / January 2011

R Number: R91433

Sample Type: Seawater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0162-001	Outfall Water	EPA 906.0	Tritium	-41.1 ± 150	260	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received	Lab No. (Leave Blank) N11-6162
	Date & Time Sampled 1/25/11 - 0745	Serial Number R 91433
<b>Collector Information</b> Name: <u>TOM HOOK</u> Dept./Branch: <u>P.O. BOX 50</u> Address: <u>AVILA BEACH, CA 93424</u> Telephone No.: <u>(209) 345-4409</u>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <u>DOPP OUTFALL</u> Sampling Point (s): <u>OUT</u> System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |  |  |
|---|--|--|--|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input type="checkbox"/> Surface Water       | <input type="checkbox"/> Wastewater                              |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System | <input type="checkbox"/> Point of Use (POU)                      |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |  |  |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input checked="" type="checkbox"/> Seawater | <input type="checkbox"/> Sludge (Semi-solid Samples)             |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                | <input type="checkbox"/> Soil/Sediment                           |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes               | <input type="checkbox"/> Biota (Type): _____                     |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister      | <input checked="" type="checkbox"/> Other: <u>TRITIUM SAMPLE</u> |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |  |  |

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ / Ice/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_
- ☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_
- ☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |   |  |
|---|---|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                           | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (SC)                      | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input checked="" type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                            | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                           | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90                     | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                            | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |                                    |                              |                              |
|------------------------------------|------------------------------|------------------------------|
| 1. Date <u>1/25/11</u>             | Name (Print) <u>TOM HOOK</u> | Date <u>1/25/11</u>          |
| Time Custody Received <u>0745</u>  | Organization <u>PG&amp;E</u> | Signature <u>[Signature]</u> |
| 2. Date _____                      | Name (Print) _____           | Date _____                   |
| Time Custody Received _____        | Organization _____           | Signature _____              |
| 3. Date <u>5/17/11</u>             | Name (Print) <u>A. TAN</u>   | Date _____                   |
| Time Custody Received <u>11:00</u> | Organization <u>DWRUB</u>    | Signature <u>[Signature]</u> |
|                                    |                              | Time Custody Released _____  |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



MARK B. HORTON, MD, MSPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN, JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0163

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/11/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 01/19/2011 08:25 Date/Time Received: 02/25/2011 10:35

Site Name: Diablo Canyon NPP

Source Name: DCNPP / January 2011

R Number: R91425

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0163-001	Diablo Creek	EPA 901.1	K-40	293 ± 14.9	47.9	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received	Lab No. (Leave Blank) <b>N11-0163</b>
	Date & Time Sampled <b>11/19/11 0825</b>	Serial Number <b>R 91425</b>
<b>Collector Information</b> Name: <b>Tom Hook</b> Dept./Branch: <b>P.D. Box 50</b> Address: <b>AVILA BEACH, CA 93424</b> Telephone No.: <b>(805) 545-4419</b>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <b>DIABLO CREEK</b> Sampling Point (s): <b>SS2</b> System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☐ Drinking Water ☐ Groundwater ☒ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters \_\_\_\_\_ Date/Time \_\_\_\_\_ ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ ☐ Milk ☐ Soil/Sediment  
Starting: \_\_\_\_\_ ☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_ ☐ Radon Canister ☐ Other: \_\_\_\_\_
- ☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Red/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☒ Gamma Scan  
☐ Total Uranium ☐ Total Beta (BSC) ☐ NORM (Gamma)  
☐ Total Radium ☐ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

1.	Date: <b>11/19/11</b> Time Custody Received: <b>0825</b>	Name (Print): <b>Tom Hook</b> Organization: <b>P.D. Box 50</b> Signature: _____	Date: <b>11/19/11</b> Time Custody Released: <b>1700</b>
2.	Date: _____ Time Custody Received: _____	Name (Print): _____ Organization: _____ Signature: _____	Date: _____ Time Custody Released: _____
3.	Date: _____ Time Custody Received: _____	Name (Print): _____ Organization: _____ Signature: _____	Date: _____ Time Custody Released: _____

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: **0.01 MR/hr**  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable

## Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

### FINAL Analysis Results Report for Task ID. N11-0164

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 05/25/2011

#### Requestor

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

#### Site and Sample Information

Collector's Name: Tom Hook

Date/Time Collected: 01/19/2011 08:25 Date/Time Received: 02/25/2011 10:42

Site Name: Diablo Canyon NPP

Source Name: Diablo Creek

R Number: R91411

Sample Type: Surface Water

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0164-001	Diablo Creek	EPA 906.0	Tritium	-22.4 ± 151	260	pCi/L

1. Precision criteria for these methods were determined to be acceptable.  
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980  
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received	Lab No. (Leave Blank) N11-0164
	Date & Time Sampled 1/19/11 0825	Serial Number R 91411
<b>Collector Information</b> Name: Tom Hook Dept./Branch: P.O. Box 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 515-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: DIABLO CREEK Sampling Point (s): 552 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- |   |  |   |   |
|---|--|---|---|
| <input type="checkbox"/> Drinking Water   | <input type="checkbox"/> Groundwater                 | <input checked="" type="checkbox"/> Surface Water | <input type="checkbox"/> Wastewater                       |
| <input type="checkbox"/> Raw  | <input type="checkbox"/> Water Treatment Plant (WTP) | <input type="checkbox"/> Distribution System      | <input type="checkbox"/> Point of Use (POU)               |
| <input type="checkbox"/> Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted |  |   |   |
| <input type="checkbox"/> Air Filters  | Date/Time  | <input type="checkbox"/> Seawater                 | <input type="checkbox"/> Sludge (Semi-solid Samples)      |
| Finishing: _____  | _____  | <input type="checkbox"/> Milk                     | <input type="checkbox"/> Soil/Sediment                    |
| Starting: _____   | _____  | <input type="checkbox"/> Wipes                    | <input type="checkbox"/> Biota (Type): _____              |
| Net (M <sup>3</sup> ) _____   | _____  | <input type="checkbox"/> Radon Canister           | <input checked="" type="checkbox"/> Other: TRITIUM SAMPLE |
| <input type="checkbox"/> Air Charcoal Cartridge   |  |   |   |

## COMMENTS: (Cautions, etc.):

- |  |   |                                       |
|--|---|---------------------------------------|
| <input type="checkbox"/> Field Treatment: Preservatives added: _____                         | <input type="checkbox"/> Field/Frozen: _____              | <input type="checkbox"/> Other: _____ |
| <input type="checkbox"/> Field Measurement: _____ mR/hr                                      | <input type="checkbox"/> Radionuclide(s), if known: _____ |                                       |
| <input type="checkbox"/> Rush/Priority (should be prearranged and have supervisory approval) |   |                                       |

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input type="checkbox"/> Gamma Scan                  |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

- |                              |                        |                              |
|------------------------------|------------------------|------------------------------|
| 1. Date: 1/19/11             | Name (Print): Tom Hook | Date: 1/19/11                |
| Time Custody Received: 0825  | Organization: PG&E     | Time Custody Released: 1700  |
| Signature: [Signature]       |                        |                              |
| 2. Date: _____               | Name (Print): _____    | Date: _____                  |
| Time Custody Received: _____ | Organization: _____    | Time Custody Released: _____ |
| Signature: _____             |                        |                              |
| 3. Date: _____               | Name (Print): _____    | Date: _____                  |
| Time Custody Received: _____ | Organization: _____    | Time Custody Released: _____ |
| Signature: _____             |                        |                              |

## LABORATORY REMARKS (Leave Blank)

- |  |  |  |   |
|--|--|--|---|
| <b>A. Condition at Time of Receipt:</b>        |  |  |   |
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container    | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled   | <input type="checkbox"/> Insufficient Sample |   |
| <b>B. Preservatives/Carriers:</b>              |  |  |   |
| <input type="checkbox"/> Added While Sampling  | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added           | <input type="checkbox"/> Not Applicable     |





MARK B. HORTON, MD, MSPH  
Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804  
Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN, JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0165

Analyst: Angela Tan

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 03/11/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 01/19/2011 08:36 Date/Time Received: 02/25/2011 10:44

Site Name: Diablo Canyon NPP

Source Name: DCNPP / January 2011

R Number: R91430

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result <math>\pm</math> CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0165-001	Bio Lab Sink	EPA 901.1	K-40	-10.8 $\pm$ 12.1	57.8	pCi/L

1. Precision criteria for these methods were determined to be acceptable.

2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980

3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received	Lab No. (Leave Blank) N11-0165
	Date & Time Sampled 11/19/11 0836	Serial Number R 91430
<b>Collector Information</b> Name: TOM HOOK Dept./Branch: P.O. Box 56 Address: AVILA BEACH, CA 93424 Telephone No.: (805) 345-4409	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: BID LAB Sampling Point (s): DW1 System No.:	<b>Billing Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted
- ☐ Air Filters \_\_\_\_\_ Date/Time \_\_\_\_\_ ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ ☐ Milk ☐ Soil/Sediment  
Starting: \_\_\_\_\_ ☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_ ☐ Radon Canister ☐ Other: \_\_\_\_\_  
☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- |   |  |  |
|---|--|--|
| <input type="checkbox"/> Gross Alpha            | <input type="checkbox"/> Gross Beta                | <input checked="" type="checkbox"/> Gamma Scan       |
| <input type="checkbox"/> Total Uranium          | <input type="checkbox"/> Total Beta (LSC)          | <input type="checkbox"/> NORM (Gamma)                |
| <input type="checkbox"/> Total Radium           | <input type="checkbox"/> Tritium ( <sup>3</sup> H) | <input type="checkbox"/> Isotopic Americium / Curium |
| <input type="checkbox"/> Radium-226             | <input type="checkbox"/> Carbon-14                 | <input type="checkbox"/> Isotopic Plutonium          |
| <input type="checkbox"/> Radium-228             | <input type="checkbox"/> Iodine-131                | <input type="checkbox"/> Isotopic Thorium            |
| <input type="checkbox"/> Radon-222              | <input type="checkbox"/> Strontium-89, 90          | <input type="checkbox"/> Isotopic Uranium            |
| <input type="checkbox"/> Other (Specify): _____ | <input type="checkbox"/> Nickel-63                 | <input type="checkbox"/> Iron-55                     |

## CHAIN OF CUSTODY

1.	Date: 11/19/11	Name (Print): TOM HOOK	Signature: [Signature]	Date: 11/19/11
	Time Custody Received: 0836	Organization: PG&E		Time Custody Released: 1700
2.	Date: _____	Name (Print): _____	Signature: _____	Date: _____
	Time Custody Received: _____	Organization: _____		Time Custody Released: _____
3.	Date: _____	Name (Print): _____	Signature: _____	Date: _____
	Time Custody Received: _____	Organization: _____		Time Custody Released: _____

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt: 10-01 MR/hr
- |  |  |  |   |
|--|--|--|---|
| <input type="checkbox"/> Acceptable            | <input type="checkbox"/> Broken Container  | <input type="checkbox"/> Leaked in Transit   | <input type="checkbox"/> Improper Container |
| <input type="checkbox"/> Holding Time Exceeded | <input type="checkbox"/> Sample Not Cooled | <input type="checkbox"/> Insufficient Sample |   |
- B. Preservatives/Carriers:
- |   |  |                                    |   |
|---|--|------------------------------------|---|
| <input type="checkbox"/> Added While Sampling | <input type="checkbox"/> Added in Laboratory | <input type="checkbox"/> Not Added | <input type="checkbox"/> Not Applicable |
|---|--|------------------------------------|---|



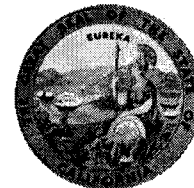
Howard Backer, MD, MPH  
Interim Director

State of California - Health and Human Services Agency  
California Department of Public Health

Drinking Water and Radiation Laboratory Branch

850 Marina Bay Parkway, Richmond, CA 94804

Phone: (510) 620-2911 Fax: (510) 620-2940



EDMUND G. BROWN JR.  
Governor

FINAL Analysis Results Report for Task ID. N11-0166

Analyst: Sony Cai

Analysis Approved By: Shiyamalie Ruberu

Analysis Approval Date: 05/25/2011

**Requestor**

Name: Steve Hsu

Organization: Radiologic Health Branch

Address: MS 7610, 1500 Capitol Avenue

City: Sacramento

State: CA

Zip Code: 95814-5006 Phone: 916-440-7940

**Site and Sample Information**

Collector's Name: Tom Hook

Date/Time Collected: 01/19/2011 08:36 Date/Time Received: 02/25/2011 10:47

Site Name: Diablo Canyon NPP

Source Name: DCNPP / January 2011

R Number: R91434

Sample Type: Drinkingwater

<u>Sample ID</u>	<u>Sampling Point</u>	<u>Method</u>	<u>Parameter</u>	<u>Result ± CE</u>	<u>MDA<sub>95</sub></u>	<u>Units</u>
N11-0166-001	Bio Lab Sink	EPA 906.0	Tritium	-70.9 ± 150	260	pCi/L

1. Precision criteria for these methods were determined to be acceptable.
2. CE is the counting error at the 95% confidence level as defined in Prescribed Procedures for Measurement of Radioactivity in Drinking Water, EPA-600/4-80-032, August 1980
3. MDA<sub>95</sub> is the sample specific minimum detectable activity at the 95% confidence level, which is the LLD<sub>95</sub> divided by 2.22, the efficiency and the yield, and may include factors for abundance, decay and ingrowth, depending on the particular radionuclide. LLD<sub>95</sub> is defined in section 7020C, Standard Methods for the Examination of Water and Wastewater, American Water Works Association, 21st Ed., 2005, where Sb is the square root of the instrument background count rate.

## REQUEST FOR SAMPLE ANALYSIS (Radiochemical)

<b>Sanitation and Radiation Laboratories Branch</b> 850 Marina Bay Parkway, G164 Richmond, CA 94804 510-620-2911	Date Received	Lab No. (Leave Blank) N11-0166
	Date & Time Sampled 1/19/11 0836	Serial Number R 91434
<b>Collector Information</b> Name: <u>TOM HOOK</u> Dept./Branch: <u>P.O. BOX 50</u> Address: <u>AVILA BEACH, CA 93424</u> Telephone No.: <u>(805) 545-4409</u>	<b>Reporting Information</b> Name: Dept./Branch: Address: Telephone No.:	
<b>Sample Information</b> System Name / Facility: <u>BIO LAB</u> Sampling Point (s): <u>DW1</u> System No.:	<b>Shipping Agency</b> <input type="checkbox"/> DWFOB ( ) <input type="checkbox"/> RHB <input type="checkbox"/> RWQCB ( ) <input type="checkbox"/> DTSC <input type="checkbox"/> DWTPB <input type="checkbox"/> FDB <input type="checkbox"/> DWR <input type="checkbox"/> CDFG <input type="checkbox"/> EMB <input type="checkbox"/> Other (Specify) _____	

## TYPE OF SAMPLE (Check all applicable boxes)

- ☒ Drinking Water ☐ Groundwater ☐ Surface Water ☐ Wastewater  
☐ Raw ☐ Water Treatment Plant (WTP) ☐ Distribution System ☐ Point of Use (POU)  
☐ Treated (circle one): Chlorinated / Chloraminated / Chlorine Dioxide / Ozonated / Peroxzone / Fluoridated / Coagulated / pH Adjusted

- ☐ Air Filters ☐ Seawater ☐ Sludge (Semi-solid Samples)  
Finishing: \_\_\_\_\_ Date/Time: \_\_\_\_\_  
☐ Milk ☐ Soil/Sediment  
Starting: \_\_\_\_\_  
☐ Wipes ☐ Biota (Type): \_\_\_\_\_  
Net (M<sup>3</sup>) \_\_\_\_\_  
☐ Radon Canister ☐ Other: Fritium Sample  
☐ Air Charcoal Cartridge

## COMMENTS: (Cautions, etc.):

- ☐ Field Treatment: Preservatives added: \_\_\_\_\_ Iced/Frozen: \_\_\_\_\_ Other: \_\_\_\_\_  
☐ Field Measurement: \_\_\_\_\_ mR/hr ☐ Radionuclide(s), if known: \_\_\_\_\_  
☐ Rush/Priority (should be prearranged and have supervisory approval)

## ANALYSIS REQUESTED (For questions, please call 510-620-2911)

- ☐ Gross Alpha ☐ Gross Beta ☐ Gamma Scan  
☐ Total Uranium ☐ Total Beta (LSC) ☐ NORM (Gamma)  
☐ Total Radium ☒ Tritium (<sup>3</sup>H) ☐ Isotopic Americium / Curium  
☐ Radium-226 ☐ Carbon-14 ☐ Isotopic Plutonium  
☐ Radium-228 ☐ Iodine-131 ☐ Isotopic Thorium  
☐ Radon-222 ☐ Strontium-89, 90 ☐ Isotopic Uranium  
☐ Other (Specify): \_\_\_\_\_ ☐ Nickel-63 ☐ Iron-55

## CHAIN OF CUSTODY

- |    |                                    |                               |                               |                                    |
|----|------------------------------------|-------------------------------|-------------------------------|------------------------------------|
| 1. | Date: <u>1/19/11</u>               | Name (Print): <u>TOM HOOK</u> | Signature: <u>[Signature]</u> | Date: <u>1/19/11</u>               |
|    | Time Custody Received: <u>0836</u> | Organization: <u>PG&amp;E</u> |                               | Time Custody Released: <u>1700</u> |
| 2. | Date: _____                        | Name (Print): _____           | Signature: _____              | Date: _____                        |
|    | Time Custody Received: _____       | Organization: _____           |                               | Time Custody Released: _____       |
| 3. | Date: _____                        | Name (Print): _____           | Signature: _____              | Date: _____                        |
|    | Time Custody Received: _____       | Organization: _____           |                               | Time Custody Released: _____       |

## LABORATORY REMARKS (Leave Blank)

- A. Condition at Time of Receipt:  
☐ Acceptable ☐ Broken Container ☐ Leaked in Transit ☐ Improper Container  
☐ Holding Time Exceeded ☐ Sample Not Cooled ☐ Insufficient Sample
- B. Preservatives/Carriers:  
☐ Added While Sampling ☐ Added in Laboratory ☐ Not Added ☐ Not Applicable